THE RAILWAY GAZETTE
A Journal of Management, Engineering and Operation
INCORPORATING
Railway Engineer · TRANSPORT · The Railway News
The Railway Times · Herapath's Railway Journal · THE RAILWAY RECORD.
RAILWAYS ILLUSTRATED · ESTABLISHED 1835 · THE RAILWAY OFFICIAL GAZETTE

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Annual subscription £3 10s. 0d. post free. Single copies, One shilling & Sixpence
Registered at the G.P.O. as a newspaper. Entered as second-class matter in U.S.A.

Vol. 94] FRIDAY, JUNE 22, 1951 [No. 25

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Adjustment of Transport Charges

THE persistence of Lord Hurcomb, Chairman of the British Transport Commission, in stating the case for economic charges by nationalised transport undertakings, deserves to achieve its object, the acceptance by the public and more particularly by the trading community of the necessity for "quick and flexible changes" in rates and fares so long as the costs of wages, materials, and so on, continue to rise. The case was put trenchantly in Lord Hurcomb's address last Friday to the annual meeting of the Liverpool & Merseyside Industrial Development Association. Where any business, he said, is subject to "the sudden shocks of increases" in costs, it is bound to increase its own prices while seeking every possible internal economy. He might have added that these shocks at present tend to come in rapid succession. In any case, the increases in charges which his Commission under the present statutory procedure is, after a considerable time-lag, authorised to make, leave a considerable gap between the rise in costs and the rise in charges designed to offset those costs. In view of the repeated efforts of officers of the B.T.C. and its Executives to effect economies in their undertakings, the more responsible critics must know by now that in the periodical raising of charges the Commission is not irresponsibly passing on rises in costs, as has been alleged—even supposing that the increase in charges did cover the rise. How far the present tardy stepping-up of charges in the rear of costs can continue, is debatable. Flexibility and quickness in adjusting charges are impossible with the present machinery. Lord Hurcomb demands "a reasonable discretion to conduct a commercial . . . business in a commercial way." Unpopular as any extension would be of powers for nationalised transport to raise its own charges, it would be infinitely preferable to a transport subsidy. Lord Hurcomb reminded his audience that the Governmental restriction on capital expenditure by the B.T.C. applied not only to new works, but also to renewals and maintenance, so that "the Commission can do little more than preserve its undertaking in a reasonable working condition."

Safety Devices in the Western Region

THE facts as to signalling in the Western Region, which has been the subject of allegations of reduced safety measures, notably as regards temporary speed restrictions, are simply stated by the Chief Regional Officer, Mr. K. W. C. Grand. Automatic train control, previously in use on the G.W.R. and the Western Region, is still in use. The contention that the former G.W.R. practice in connection with speed restrictions, of keeping the distant signal at caution, has been altered, is correct: the alteration was made in March, 1949, after full consideration, to conform with other Regions. Where temporary speed restrictions have to be introduced, it is standard practice in all Regions to provide warning boards approaching and at the beginning and end of the restricted section, and these are lighted at night. Statements by a driver on the "reckless and inefficient" administration of British Railways, on which he has been trying to organise a petition for a public inquiry, and those of another driver on "Midlandisation" of the Western Region, point to a malaise which has deeper causes, though confined to a small minority. One cause seems to be that failure of the employee to face inevitable change, to which Lord Hurcomb recently alluded. Meanwhile the union concerned, the Associated Society of Locomotive Engineers & Firemen, has wisely refused to associate itself with these unofficial representations.

Euston Station Resignalling Scheme

SOME details of the improvements which the London Midland Region is to carry out at Euston Station in the next two years at a cost of £300,000 were given in our March 16 issue. The work is to be carried out in stages and includes a resignalling scheme for which the main contractor is the Westinghouse Brake & Signal Co. Ltd. The work will include the provision of 100 sets of electro-pneumatic facing point layouts involving some 2½ miles of air main and branch piping. The installation is of special interest for the reason that, although this type of point operation has been used extensively by London Transport and elsewhere in the country, this will be the first main-line London terminus to be equipped in this way. The contract also includes the provision of 110 a.c. condenser fed track circuits, 31 field locations using 44 apparatus cases, 1,000 a.c. relays, electrically-driven and diesel-driven compressors, switchboards, steel relay racks, and disconnection racks. The 227-lever all-electric Westinghouse power frame to be installed was built some years ago and was held by the former L.M.S.R. as war emergency stock. The L.M.R. will provide 34 main colour-light signals and 36 ground-light signals, the main run of cable, and a 60 kW. diesel alternator for emergency standby supply.

Decentralisation of the Coal Industry

THE National Coal Board fifteen-year plan published last year, whilst proposing heavy capital expenditure and the closing of uneconomic pits, naturally envisaged no great organisational changes. Its report for 1950, on which we commented last week, points to falling manpower as a main cause of the slow start in increasing output. There is however much criticism of undue centralisation in the N.C.B., and of frustration of the management at lower levels. This is voiced in a pamphlet by Colonel C. G. Lancaster, Vice-Chairman of the Conservative Party Fuel & Power Committee, published recently under the auspices of (but not yet approved officially by) the party, which advocates drastic decentralisation, including reduction of the present 48 N.C.B. Areas to 30 autonomous districts and abolition of

the Divisional Boards; the size of the district would vary according to circumstances, but it should deal with the disposal of its own products, the annual output of which would average 7,000,000 tons. The work of the central Board would be confined to broad policy, including marketing policy and price structure, and financial control. One result of the proposal if implemented would be improved staff relations resulting from less impersonality in dealings between men and management, and this, with greater scope for initiative at district and lower levels, might go far to achieve favourable results.

Conscription of Railwaymen

THE refusal of the Minister of Labour, Mr. Alfred Robens, mentioned in his reply to a Parliamentary question recorded elsewhere in this issue, to grant the British Transport Commission request for deferment of military service for railwaymen, seems unlikely to be reversed unless the labour situation on the railways grows much worse. How bad that situation is, was shown in an editorial article in our June 8 issue, in which we stressed the wastage among railway staff caused by failure of national servicemen to return after completion of military service. The Minister's decision doubtless is mainly on grounds of equity—and perhaps on the view that the railways by cancelling passenger trains and other steps can continue to save manpower without endangering rearmament and the national economy generally. In this he is mistaken, for, as we have pointed out, it is not only in the operating grades that vacancies exist: continued shortage in the permanent way grades sooner or later will have more serious results than the present deplorable inability to accelerate some passenger trains. The Government should recognise the strategic importance of the railways, as previous Governments have done in past emergencies. In present circumstances no other measure can do as much as deferment to alleviate—it cannot solve—the railway labour situation.

G.N.R.(I.) Summer Train Services

THE G.N.R.(I.) summer timetable began on June 17. The 20 new diesel railcars delivered during the last twelve months are in service on main or secondary lines and about one-third of the daily passenger mileage is being worked by railcars or railbuses. An additional non-stop "Enterprise" express is operated on weekdays by a four-coach diesel train leaving Dublin at noon and Belfast at 4.50 p.m. Passengers travelling between these two points in either direction now have the choice of seven trains—four steam trains and three diesel: of these, three are "Enterprise" expresses. The through "Enterprise" working between Belfast, Dublin, and Cork, operated in conjunction with Coras Iompair Eireann, was restored on June 18. This service was suspended between Dublin and Cork since March 28 when, because of a serious coal shortage, C.I.E. was compelled to reduce train-mileage. Timings and stops are the same as formerly. The "Bundoran Express" which caters for pilgrim traffic from Dublin to Lough Derg and holidaymakers for County Donegal has been running since July 1.

Institute of Transport Congress

THIS year the annual congress of the Institute of Transport was held at Torquay. The venue was well-chosen for, apart from the scenic and other amenities of the surroundings, it is an area served by all the forms of transport with which the Institute is concerned. This year's President, Mr. J. S. Wills, is Managing Director of the British Electric Traction Co. Ltd., and some of the road transport undertakings allied to that company serve the Devonshire area. The congress was undoubtedly successful, not only in the attendance it secured of prominent members of the transport industry, but also because it produced two excellent papers, one by Sir William Wood and the other by Mr. David Renton, M.P., which elicited useful and frank discussions. Not the least value of these congresses is the opportunity it affords for transport men of all interests and shades of opinion to meet, to exchange views, and to get to know one another better and so to appreciate more fully the problems of the various branches of their industry. The participation in the congress of representatives of several large trading organisations was particularly valuable. It was a pity that more railway officers did not attend, for there was never a time when it was more essential for railwaymen to keep in the closest possible touch with opinion both within and without the industry.

Southern Region Punctuality

THE high standard of passenger train punctuality which has characterised Southern Region operation since the war, was maintained during the difficult four weeks ended January 27, when the average late arrival of steam trains was 1·63 min. and that of electric trains 1·90 min. Commenting on these figures in the Southern Region edition of *British Railways Magazine*, Mr. S. W. Smart, Superintendent of Operation, attributes the increase in steam late arrivals by 0·39 min. and in electric arrivals by 0·45 min., to ice and snow during the first week of the month. Steam train arrivals during January have been more punctual than those of electric trains, since 1947, before which there was a considerable disparity in favour of the electric services. Goods train punctuality deteriorated from an average late arrival of 3·4 min in January, 1950, to 4·6 min. in January this year, and Mr. Smart comments that goods train working was still quite good, though also affected by ice and snow. Results for the latest period, compared with those for previous periods, are:—

AVERAGE MINUTES LATE ARRIVAL (WEEKDAYS)

	Four weeks ended						
	1945 Dec. 29	1946 Jan. 26	1947 Jan. 25	1948 Jan. 24	1949 Jan. 29	1950 Jan. 28	1951 Jan. 27
Steam ...	8·06	5·85	2·55	1·35	1·58	1·24	1·63
Electric ...	4·97	4·04	2·70	1·37	2·05	1·45	1·90
Freight ...	25·6	22·3	7·5	3·7	4·1	3·4	4·6

Progress of the New Woodhead Tunnel

REPRESENTATIVES of the technical press visited the Manchester-Sheffield main line on Tuesday of this week, to see the progress made with the construction of the new three-mile tunnel under the Pennines, between Dunford Bridge and Woodhead. The pilot tunnel, which was completed on May 16, is now being enlarged to the full-size bore, and some 1,300 ft. already have been excavated to the final dimensions. This work is being carried out from both ends of the tunnel, but not, at present, from the intermediate shaft used in the construction of the pilot tunnel. Bands of shale in the general sandstone formation, and faults in the strata, have caused considerable, but not unexpected difficulties, and much of the pilot tunnel has been supported by steel ribs. The isolated situation of the tunnel, in the heart of the Pennines, has necessitated the provision of accommodation for the workmen at Dunford Bridge. In addition to dormitories, dining rooms, kitchens, and a sick bay, the camp has its own post office, cinema, and rest rooms. These amenities contrast vividly with the conditions in which the men who built the original twin tunnels lived and worked a century ago. Contemporary records show that they had to endure hardships which would now be considered appalling. It is expected that the new tunnel will be opened early in 1953, when the electrification of the railway on the 1,500-volt d.c. overhead system will be completed.

Failure of an Engine

THE failure of an engine near Northolt West Junction on August 28, 1950, when a little-end became disconnected, was inquired into by Mr. J. L. M. Moore, whose report appears in abridged form in this issue. It was fortunate that the consequences were not much more serious and that the driver and fireman escaped serious injury. Steam and water forced them to leave the footplate, but the driver eventually got back, and by applying the tender hand brake prevented the train from running on as far as it would otherwise have done. Mr. Moore considers that the examin-

ing fitter had not been sufficiently careful when last looking over the engine, or he must have noticed that a castle nut was working loose. This nut eventually sheared its split pin and came off, leading to the total breakdown of the little-end. The fitter had expressed himself unfavourably with regard to the design of the cross-head concerned and Mr. Moore thinks he had some reason to do so, for, after modifications dating back to 1938 had been made, a new design was brought out in 1947 and is being fitted as and when renewal work has to be undertaken. The report recommends that all cross-heads of the older design should be replaced as soon as possible.

Examination of Locomotives

WITH a view to providing improved facilities for the periodic inspection of locomotives, a light tunnel has recently been installed at the Thornton Motive Power Depot, Scottish Region, British Railways. The building is 90 ft. 6 in. in length and is 17 ft. 10½ in. in width at floor level. Fluorescent lighting has been installed and is so arranged as to eliminate glare and shadow. The examination pit is 76 ft. 4 in. in length and has been fitted with fluorescent lighting on both sides of the pit and over its entire length. This consists of pre-cast light boxes built into the pit walls and enables the inspection between the frames to be readily carried out. The use of fluorescent lighting for such purposes avoids the use of electric hand lamps of the plug-in type. Further particulars of the new tunnel, which is a permanent structure, are given elsewhere in this issue.

The Last C.M.E. of British Railways

THE retirement of Mr. H. G. Ivatt at the end of this month will result in the disappearance of the title "Chief Mechanical Engineer" on British Railways. Mr. Ivatt has held that position first on the L.M.S.R. and, since nationalisation, on the London Midland Region, since 1946. Mechanical engineering is in his blood, for his father, Mr. H. A. Ivatt, was Locomotive Engineer of the Great Northern Railway from 1895 to 1911. Mr. Ivatt was trained at Crewe and during his career has been responsible for a number of developments which have become standard practice on British locomotives. He designed the Class "2" and Class "4" 2-6-0 locomotives, which are being used as the basis for three of the standard locomotives which are to be produced by British Railways in their present programme.

He was also responsible for introducing on L.M.S.R. locomotives a number of details which have since become accepted as standard, such as the use of roller bearings on all axles and the adoption of the solid type of cannon box as opposed to the split tyre, which resulted in a considerable reduction in cost of manufacture. He also brought into use in this country rocking grates with self-emptying ash-pans and self-cleaning smoke-boxes, while steam-operated cylinder cocks and parallel fixing for piston heads on piston rods were other innovations he fostered. The attention he has always paid to detail is demonstrated in the self-closing doors now incorporated on British Railways new coaching stock, the suggestion for which came from him.

Mr. Ivatt's influence on British Railways is likely to be felt long after his retirement, for a number of those who served under him now hold responsible positions on British Railways. Mr. R. A. Riddles, Member of the Railway Executive for Mechanical & Electrical Engineering matters, was formerly one of Mr. Ivatt's assistants. So, also, were Mr. R. C. Bond, now Chief Officer (Locomotive Construction & Maintenance), Mr. E. Pugson, Chief Officer (Carriage & Wagon Construction & Maintenance) and Mr. E. S. Cox, Executive Officer (Design), all of the Railway Executive.

By no means all Mr. Ivatt's major activities have been confined to the furtherance of the steam locomotive. The introduction of main-line diesel locomotives in this country owes much to his initiative, for at the end of 1945, with the concurrence of Sir William Wood, who was then President of the L.M.S.R., he approached various electrical firms with the project for a main-line diesel locomotive for use on the lines of his company. The result was the agreement entered into with the English Electric Co. Ltd. and the British Thomson-Houston Co. Ltd., whereby Mr. Ivatt was responsible for the design of the locomotive and the two firms supplied diesel engines and equipment. These locomotives were the 1,500-h.p. No. 10000 and No. 10001 with English Electric equipment and the 827-h.p. No. 10800 with a Paxman engine and B.T.H. equipment. Not the least value of these two projects has been the assistance which has been accorded in demonstrating British equipment to overseas buyers, many of whose representatives have travelled on the locomotives.

The latest project in the locomotive field for which Mr. Ivatt has been responsible has come into operation just as he is on the point of retiring. This is the Fell locomotive, the most powerful diesel prime mover with mechanical transmission at present built. He recommended, and was responsible for, the construction of this locomotive.

The Railway "Crisis"

IF one were to judge by some of the articles which have appeared in the daily and weekly press recently, one might be pardoned for concluding that the British railway system was on the verge of breakdown. Several journals, usually responsible in their approach to industrial problems, have sounded a note of alarm which, in our view at least, is out of proportion to the gravity of the situation. It would be wrong to suggest that the position of the railways is not such as to justify the most careful examination, or that there is not need for measures to improve it. This, indeed, has been the case ever since the end of the war. The present state of the railways is the logical outcome of the lack of pre-vision, mainly by government, which has marked the post-war period. That at this stage it should occasion the surprise and apprehension which is now evident is merely an indication of the lack of appreciation which has been shown of the cumulative effects of the disabilities under which the railways have suffered, not only in the post-war period, but since they passed under Government control in the autumn of 1939.

Between the two world wars the railway companies, largely at the cost of their stockholders, improved the physical condition of the railways until, at the outbreak of war in 1939, they had reached a peak. During the war they were subjected to a wholly abnormal strain and they were unable, partly because of the need to maintain practically perpetual services, but also because of the acute shortage of men and materials, to undertake even normal repair and maintenance work. Since the war, they have been restrained by government decision from putting in hand anything approaching the volume of repair and maintenance or the reconditioning of their physical assets which is necessary, not merely to bring them back to the state of efficiency which obtained in 1939, but to cope with the added burdens which have been imposed on them.

Some indication of the backlog which exists was given by Sir William Wood at the Institute of Transport Congress last week, when he said that it would require some £120 millions to make good railway deficiencies at the present time. Much of this money, if it could be spent, would be revenue-producing. All of it would improve the efficiency of the railways and the service they could provide to the trading and travelling community. On a number of occasions in these columns comment has been made not only on the unfortunate effects of the government policy in relation to so-called capital expenditure as it applies to the railways, but in particular to the falseness of the basis on which this capital expenditure is judged.

By no means all the criticisms of the railways in recent weeks have been directed at the right quarter. When, some time ago, it became necessary to reduce passenger train services, it was well-known that this was done at the request of the government so that coal might be saved. In the intervening period this point appears to have been forgotten. Some newspapers have now referred to these cuts as having been made by the railways, apparently for their own

purposes. There has also been loose talk of the "insolvency" of the railways because of the deficit on the operation of the British Transport Commission services. We believe it necessary to remove that deficit, but its existence certainly does not mean that the railways are insolvent in the normally accepted sense of the word.

The Financial Times last week criticised the railways on a number of counts but, perhaps, was not as consistent in its arguments as one might have expected. In the first paragraph of a leading article it stated that "while production and exports rise a shortage of skilled manpower—not a shortage of equipment—is preventing it [the Railway Executive] from meeting the full demand for its freight service." In its second paragraph, however, it says "circumstances have prevented it from investing the capital which is theoretically desirable, even from adequately maintaining its permanent way and rolling stock." In another article on railways in its same issue, it refers to the fact that passenger journeys have declined, while the passenger mileage has risen. It shows that passenger miles were 19,702 millions in 1938 as against 21,138 millions in 1949 and 20,177 millions in 1950, whereas passenger journeys in the same years declined from 1,206 millions to 993 millions and 982 millions respectively. The train cuts we have referred to were partly responsible, but from a railway operating point of view it would seem probable that the longer journeys were more remunerative.

The Economist has also had something to say about the position of the railways. Without specifying precisely what it means it talks of "a combination of labour shortage, low pay and labour-wasting practices: an accumulation of delayed freights matched by resolute opposition to the freer use of road transport: a mutual cost-raising partnership with the coal industry: a disregard for the customer's convenience unmatched by any merely private monopoly." It is on much sounder ground when it goes on to say that "the unreality of railway charges is the unreality of any set of prices, institutionally removed from the market process and readjusted only at long intervals and by jerks." It is safe to say that no one would be better pleased than the railway administration in this country if a system of adjustment of railway charges could be evolved which overcame the present grave disability; this is that, in a period of rising prices, the delays which inevitably occur between the lodging of an application for increased charges—which must be based on price levels at that time—and the agreement by the Rates Tribunal and subsequent implementation, inevitably mean that the level of new charges lags behind the new price level by the time it comes into force. Successive adjustments merely tend to reduce the disparity between costs and charges, but never permit the latter to overtake the former. Between the wars, when the price level was falling, there was far less delay in readjustment of charges in a downward direction.

With all the attention that is being directed to the failings of the railways it may, perhaps, be salutary to quote some of their achievements. In 1950, for example, the load per freight train was 18 per cent. greater than during the highest pre-war year (1924) and the net ton-miles moved were 15 per cent. greater. The respective increases over 1938 were 26 per cent. and 33 per cent. Average wagon capacity is up by 8 per cent.

The average wagon load in the case of merchandise is now 25 per cent. greater than it was in the highest pre-war year, which was 1927, and is 31 per cent. greater than in 1938. In the case of minerals, which reached their pre-war peak in 1938, it is 11 per cent. greater. Similarly in the case of coal, it is up by 9 per cent. For all classes of traffic it shows an improvement of 12 per cent. The best figures for train loads before the war occurred in 1924 for both passenger and goods, but in 1950 an improvement of 18 per cent. was achieved in the case of freight and of 4 per cent. in that of passengers. Considering the restrictions which have been placed on capital expenditure on the railways and the shortages of men and materials with which they have to contend, it does not look as though the "poor bag of assets" inherited from the railway companies after the strains of war has been doing too badly.

Western Region New Works at Port Talbot

ONE of the largest industrial developments in South Wales since the war is the expansion of the Port Talbot plant of the Steel Company of Wales Limited. This takes the form of a new 80 in. hot strip mill constructed to the south of the existing steel smelting works of the company, which also have been extended and developed to feed the mill. Both the old and new parts of the undertaking are ranged continuously for about three miles alongside the South Wales main line of the Western Region of British Railways and are served by it. On its own land the steel company has a complete and well-equipped layout of railway sidings and connections, and these facilities have been extended to meet the expansion of the steel plant. Extensive new works were undertaken by British Railways, not only to cater for the additional traffic resulting from the expansion of the steel works, but also to remove and replace formerly-existing railway connections and sidings to allow space for the economical extension of the plant.

The cost of these British Railways new works is put at £1,100,000, and on the credit side it is expected that the railway will receive some 10,000 tons a week of additional outwards traffic consisting of plates, sheets, and tinplates for export and inland destinations. The total inwards traffic, when the plant is in full production, will amount to over 2,000,000 tons a year, consisting of iron ore, coal, limestone and scrap iron. The engineering works involved in these new works are described in an article in this issue, but there are one or two additional points of interest. For instance, it should be explained that the old West Curve line, a low-level connection, ran through what is now the extension of the smelter; it was joined by the Port Talbot Railway which descended from a now-dismantled bridge over the main line on a gradient to the junction.

Moreover, it may not be quite clear from the diagram of the layout or from the description how the new strip mill is connected with British Railways. This is because the two connections with the mill are part of the steel company's layout. One of them takes off a British Railways shunt spur near Margam Moors or Margam Abbey East signalbox, and runs north-westwards and westwards round the new Margam Moors grid, and so into the south end of the mill. The other connection is made *via* the smelter—shown on the diagram as "Steel Co. of Wales Ltd. existing works"; it is a rail and road connection passing under bridges Nos. 3 and 4.

As well as the lines running into the smelter from Margam Wharf, there is another rail connection from the Cefn Gurgan area, by way of the eastern of the three lines shown leading to the steel company's coal and ore sidings, straight across to bridge No. 2, and so into the smelter area; this connection again is the property of the steel company except where shown on the diagram. Incidentally, the coal and ore sidings are dead-ends terminating at new elevators, which lift the material above the level of the new West Curve near Capper Works Junction box; it is carried thence on conveyors over the West Curve lines into the smelter.

An important point to be noted regarding the various new connections, the remodelling of the different grids and other sidings, and the new construction works generally, is their relationship with previously-existing lines, on which traffic had to be kept moving. Considerable preliminary thought and planning must have been necessary to ensure (*a*) that the various stages of the work interfered as little as possible with the original layout and traffic, and (*b*) that adequate facilities for all departmental and other interests were maintained at all times throughout the whole area. Simple low-level connections had to be replaced by a network of high-level lines involving three junctions and a number of bridges, viaducts, and retaining walls in the West Curve area. Other lines, sidings, junctions and grids had to be constructed, moved, or remodelled elsewhere.

It is clear, therefore, that the million cu. yd. of material mentioned as required for the railway earthworks, gives only an incomplete idea of the size and difficulties of the undertaking as a whole. Nor does the reference to the 22 miles of track and five new signalboxes complete the

picture, in which bridging and walling are an important feature. Such extensive engineering works would be onerous in open country, but in this instance they had to be interlaced with an already complicated network of existing connections and sidings, and consequently much more precise planning and execution was essential. During the years 1948 and 1949 the railway handled nearly 500,000 tons of constructional materials, such as bricks, steelwork, timber, cement, ballast and contractor's plant.

Summer Train Services, Scottish Region

ONE or two train service changes of note appear in the summer timetables of the Scottish Region, operative from July 2. The night sleeping car train from Glasgow Buchanan Street to Inverness leaves at 11.15 instead of 10.20 p.m., has its wait at Perth cut from 68 to 31 min., and reaches Inverness 15 min. later. For some time the 4.5 a.m. from Glasgow Central to Aberdeen has been run through from Stirling independently of the postal train from London, but in view of the improved punctuality of the latter, the previous combined working is now resumed. The through sleeping car that has been operating between Euston and Forfar is withdrawn, and the 6.21 a.m. from Perth to Forfar and the 7.18 p.m. from Forfar to Perth, conveying this car, accordingly are discontinued.

Accelerations of Anglo-Scottish services have been referred to previously in the reviews of London Midland, Eastern, and North Eastern Region services. As a result of the cut to 7 hr. 20 min. in the running time of the "Capitals Limited" between Kings Cross and Edinburgh in both directions, the connecting train from Edinburgh Waverley to Aberdeen, conveying the through coaches, leaves at 5.5 instead of 5.30 p.m., and reaches Aberdeen at 8.36 p.m., 29 min. earlier, in 11 hr. 6 min. from London—the fastest service to Edinburgh, Dundee, and Aberdeen since the war. The southbound "Aberdonian," at 7.10 p.m. from Aberdeen, is 25 min. later in departure than last summer, and its relieving train, with restaurant car to Edinburgh, resumes the pre-war "Aberdonian" departure at 7.35 p.m. Arrivals in Kings Cross at 7.15 and 7.45 a.m. tally with those of 1950, but the schedule of the "Aberdonian" proper is unchanged. The down "Royal Scot" acceleration, which brings the Euston-Glasgow time down to 8 hr., is, however, a cut of 35 min. on present times, and of 25 min. on last summer's; southbound, also an 8-hr. run, the acceleration is 13 min. Northbound, the 10.20 a.m. from Euston to Perth, reaching Perth at 8.39 p.m., gives an acceleration of 13 min. on last summer's times and 9 min. on present times. This train and the 6.55 p.m. from Edinburgh Waverley to Perth (connecting with the down "Flying Scotsman"), due Perth 8.30 p.m., still miss the 8.10 from Perth to the Highland line.

As for a year past, there is some fast running over the former Caledonian main line between Glasgow and Carlisle. The 10.6 a.m. from Glasgow Central to Euston is booked from Symington to Carlisle, 66·9 miles, in 67 min. start-to-stop (59·5 m.p.h.), and the 1.45 p.m. from Glasgow to Manchester in 68 min. (59 m.p.h.); the southbound "Midday Scot" is booked from Carstairs to Carlisle, 73·5 miles, in 76 min. (including 3 min. recovery margin); and similarly the 9.30 a.m. from Glasgow to Birmingham. All four runs include the climb from Symington or Carstairs to Beattock Summit; the fastest pre-war times were 69 and 81 min. respectively. The southbound "Royal Scot" is allowed 119 min. to pass Carlisle station from Glasgow, as compared with 114 min. pre-war. North of Perth, the 34-min. timing of the southbound "Postal" over the 32·5 miles from Forfar to Perth has been eased to 35 min.

Among minor changes, the 7.32 a.m. from Stirling to Edinburgh *via* Falkirk, and the 5.23 p.m. from Edinburgh to Stirling, are diverted from Edinburgh Waverley to Princes Street. The limited restaurant-car services reintroduced last year between Edinburgh Princes Street and Glasgow Central have been withdrawn, though practically all the hourly expresses between Edinburgh Waverley and Glasgow Queen Street continue to include restaurant cars.

Indices of Railway Efficiency

(*By a Correspondent*)

IN its issue of May 31 *The Times* reported the Chairman of the British Transport Commission as having told the annual conference of the Transport Salaried Staffs Association that "the efficiency of railway working, measured by the published statistics, had risen by more than 25 per cent. since before the war." The report of the address by Lord Hurcomb in your June 8 issue shows that he made no such extravagant claim, but, as the editorial pointed out, the statement he did make is open to argument. Asserting that "net ton-miles per total engine-hour" was the best available measure of work done, he laid stress on an improvement of 6·6 per cent. in this statistic over the last two years, and 25·4 per cent. compared with pre-war.

Actually "net ton-miles per total engine-hour" is a conventional figure which does not indicate any well-defined unit of performance. It combines (1) train engine-hours proper, (2) shunting hours by train engines, and (3) shunting hours by yard and station pilot engines. The train engines produce all the ton-miles; the purely shunting engines do not affect directly the volume of work done as measured by ton-miles and to a large extent their number and hours of service are decided by separate factors.

In 1950, ton-miles were 32 per cent. above 1938, freight train-miles 5·5 per cent. higher, and freight train-hours 15 per cent. more, but freight shunting-hours were less by nearly a million, or 5 per cent. The contrast between 1950 and the busy pre-war year 1937 is even more striking. With ton-miles up 20 per cent., freight train-miles were 0·5 per cent. higher and freight train-hours 3·4 per cent. more, but freight shunting-hours were less by 2,411,000, or more than 11 per cent. Since the Government took control of the railways in 1939, the relation between train and shunting-hours has been changed completely by the abolition of private owners' wagons, new methods of distributing commodities—especially coal—and extensions of through working arrangements. Before the war, average ton-miles per train-hour were larger than the average per shunting-hour by 6 per cent. or more; last year the second average was 13 per cent. higher.

The change in circumstances rules out any comparison between 1950 and 1938, based on total engine-hours, as evidence of improved efficiency. The unit output per hour of freight train operating is shown better by "net ton-miles per freight train engine-hour." Last year, this statistic reached the peak of 1,086 for British Railways, 3 per cent. above 1948. As ton-mileage has risen steadily since 1947 by 6 per cent. overall, an upward trend was to be expected in this and other significant averages, which are influenced by traffic volume, when other things are equal. But increases in wagon and train loads, for example, are of no avail unless freedom of movement goes with them. That is where the U.S.A. railways score. Last year they set up new records of 20,344 net (short) ton-miles and 44,353 gross ton-miles per freight train engine-hour, while their freight train speed of 16·8 m.p.h. was only one-tenth of a mile under the 1949 level, and more than twice the British average rate of movement.

After nationalisation, freight train speed improved slightly each year, but remained well below the 9·15 m.p.h. attained in 1938. To take another test of mobility, in 1938 the former companies worked 261 wagon-miles per train engine-hour. For British Railways this statistic has never exceeded 238 in any four-week period. Moreover, the companies had to cope with 200 milion empty wagon-miles each year above the number worked by British Railways.

A reliable judgment of operating results cannot be formed unless all the main traffic figures are reviewed. In comparing two years separated by a long interval, the effects on transport of changes in the economic environment should also be considered. The annual review of U.S.A. railway operations prepared by Dr. J. H. Parmelee, Vice-President, Association of American Railroads, is an excellent example of the judicious use of statistical indices in weighing up efficiency of performance.

LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

The West London Line

May 30

SIR,—I notice with pleasure that the Southern Region summer timetable advertises a service between Clapham Junction and Kensington Olympia, but regret that it is only the present service now publicly advertised. It is, at any rate, a step in the right direction.

The same timetable appears to reduce the service on the Bulford branch to one train a day—worse than useless.

Yours faithfully,

J. B. LATHAM

18, Wheatsheaf Close, Woking

Riding of Electric Express Trains

June 11

SIR,—May I suggest that the Railway Executive would be well advised, if it wishes to avoid a serious accident sooner or later, to do something about the atrocious riding of the express trains between London and Eastbourne. As anyone with experience of these trains well knows, their riding qualities have always been at fault, but recently the violence of their oscillations has increased quite noticeably, and even in the Pullman cars it is an absolute penance to travel. It is impossible to read a newspaper or a book without straining the eyes, as one's body is heaved from side to side and bounced up and down, and no experienced traveller would dream of asking for any liquid refreshment unless he had first donned a mackintosh.

Whether it is the track or defects in the design of the bogies I cannot judge, but to say that these are the most uncomfortable express trains in Britain is not to exaggerate.

Yours faithfully,

D. M. SORBY

20, Sherriff Road, N.W.6

Railway Efficiency

May 30

SIR,—I think you will agree that the correspondence in your columns under above heading has dragged on long enough, but as Mr. E. R. B. Roberts challenges me on several points and also, with his genius for inaccuracy, quotes some incorrect statistics (despite the advice given in my previous letter), I hope I may be allowed to reply.

First of all, may I say I am sorry Mr. Roberts objects to being classed with myself as "a mere amateur" on the subject of passenger fares. I cannot, moreover, see how his experience as a traffic man on the railways of three continents, even if it does date back to 1895, entitles him to exemption from that category in regard to present-day conditions in this country—which undoubtedly differ materially from those of which he had experience—any more than my 47½ years railway experience in this country (which included, incidentally, 8 years in charge of the fares section of a company with a very heavy passenger business) exempts me. May I also say that I made no "claim" in regard to the increase in passenger traffic, 1949 compared with 1913; I merely quoted official figures.

The statistics for passenger vehicles quoted by Mr. Roberts are, as usual, wrong. The actual figures are—1913, for all railways (including some light railways and those now operated by the London Transport Executive), 51,174 (not 70,000); 1949, Railway Executive, 41,194; London Transport Executive, 3,941; total 45,135 (not under 40,000), but more to the point is the seating capacity; this, for the vehicles enumerated above was—1913, 2,458,644; 1949, R.E., 2,463,913; L.T.E., 171,163; total, 2,635,076; increase, 176,432. No doubt Mr. Roberts, with his passion for large freight vehicles, will appreciate the increased capacity of the passenger vehicles.

With regard to Mr. Roberts's question as to who are the members of the Rates Tribunal and who are the people now preparing the new schedules, I gave the information on the Rates Tribunal in a previous letter, but as Mr. Roberts apparently does not remember what he reads, repeat it for his benefit. The Transport Tribunal (formerly the Rates Tribunal) is, and always has been, composed of a distinguished lawyer as chairman; a business man experienced in transport matters; and a retired railway officer experienced in rates and charges. The present members are: Mr. Hubert Hull (President) and Messrs. J. C. Poole and A. E. Sewell (Permanent Members). As stated in a previous letter, only one accountant—the late Mr. John Quirey, who afterwards became a Vice-President of the L.M.S.R.—has ever served on the Rates Tribunal. The new schedules are being prepared by the Commercial functional member of the Railway Executive, and his staff of experts.

Mr. Roberts's last two paragraphs consist of vague generalities which help no one, and his statements, moreover, are, as usual, very far from being accurate, at all events so far as the last 50 years in this country are concerned. Is not his reference to the late Chairman of the Railway Executive—whose abilities no one disputes—a little unfortunate? Has Mr. Roberts overlooked the fact that Sir Eustace Missenden was, for the past three years of its existence, the guiding spirit of the very organisation he so persistently and unjustly accuses of inefficiency?

Yours faithfully,

J. H. LAUNDY

Rustington, Sussex

The "Leader" Class

June 11

SIR,—It appears from recent brief statements that no further trials are to be made with the "Leader" engines, and that they are to be broken up. If this is so, let us hope that the experiment will not be allowed to linger in obscurity for many years before details are published, as happened with the Midland Paget engine long ago.

Whether further experiments would be justified one is unable to say in the presence of so little information as to what has transpired already, but even if the engine has proved an admitted failure it is to be hoped that a broad view will be taken of a bold experiment. There is no disgrace in occasional failure in research; science could not progress without exploring new and hitherto untried avenues. Mr. Bulleid in his design was actuated by a laudable endeavour to assist the steam locomotive in retaining its place as the prime means of motive power on our railways in spite of the present challenge from other forms of traction. Possibly he attempted too many innovations at once, but it appears that the various faults were being gradually overcome, and one can only regret that the experiments have been brought to a close at this stage.

It is true that even if the engine could have been perfected from a mechanical point of view it does seem that a serious defect was the extremely uncomfortable conditions under which the fireman was expected to work; his cramped and enclosed quarters made firing a job such as—quite understandably—would not readily be undertaken by the footplate staff. From this point of view the engine should undoubtedly have been built as an oil burner, with suitable dual control in either cab, where the fireman would consequently be able to spend most of his time alongside the driver.

Whatever its merits and defects as revealed by the trials made, it is to be hoped in the interests of locomotive history and further progress in steam locomotive design that details of these will be made available.

Yours faithfully,

H. C. CASSERLEY

Ravensbourne, Berkhamsted

THE SCRAP HEAP

British Railways Board Trippers

Thirteen Yorkshire people who were stranded in London on a Festival trip are to have their hotel bills paid by British Railways. They were left behind at Euston at 1 a.m. The train taking their party of 413 back to Otley had only nine coaches—seating 400—instead of ten. The extra 13 refused to stand all night on the 197-mile journey. So they split up and stayed at three hotels. They travelled home next day by ordinary train.—*From the "Daily Express."*

Plaque at Littleborough Station

A plaque has been affixed to the wall of the station building at Littleborough, Lancs., to commemorate the opening on July 3, 1839, of the first section of the Manchester & Leeds Railway—the nucleus of the Lancashire & Yorkshire—and the completion of the Summit

Tunnel and opening of the whole line, on March 1, 1841.

The construction of the railway, for which Stephenson was the engineer, was begun on August 18, 1837, and 5,000 men were employed simultaneously on it. The project excited much public attention by reason of the size and variety of the works involved. The Summit Tunnel, under the Pennines, is 2,869 yd. long and has an imposing western portal.

Victorian Etiquette

Recent examples of new styles in self-identification have brought a reminder that on the London, Brighton & South Coast Railway 70 years ago there could be seen over the doorway leading from the waiting-room to the booking office a plate inscribed "Station Clerk—John So-and-so." This plaque was an official issue and the stationmaster's authority to be in charge of the station. Also, if you had gone forward to pat the engine you would have seen painted up in the cab the name of the driver—it was one engine one man in those days. The reason was obvious: Victorian etiquette required that the gentry, for whose benefit this line was originally built, should address responsible servants by their surnames, but at the same time they could not be expected to remember those names, and so an "aide mémoire" was provided.—*From "The Manchester Guardian."*

Bulgarian Train Hostess

According to Sofia Radio a new Bulgarian express supplies a hostess with every carriage to look after passengers, serve drinks, and take care of children. Compartments for mothers are supplied with cradles. The train has been put into service on the Sofia-Burgas line.

Winning the Jackpot

Lord Latham, Chairman of the London Transport Executive, recently put 6d. into an automatic ticket machine at Waterloo tube station. He put in 6d. for a 4d. ticket and within a few seconds was "ankle deep" in coins. This accident was probably caused because the machine was almost full and the coin Lord Latham put in must have fallen against an electrical contact which caused the ejection of coins to be continuous.—*From "The Star."*

Seasoned Traveller

Mr. William S. Meston, Inverurie, Aberdeenshire, who recently took out his 73rd annual season ticket for the 18-mile journey between Inverurie and Aberdeen, has established what the Scottish Region of British Railways believes to be a record for local travel, and to mark the occasion he was entertained to lunch by Mr. J. W. Barr, District Traffic Superintendent, Aberdeen. Mr. Meston, who is 87, took out his first season ticket in 1879, when he began to attend Aberdeen Grammar School.

Wine in Bulk

Regarding the project to import Languedoc wines on a large scale in this country, I went to a lunch which showed the progress of the scheme. Assembling at Gilbey House, in Camden Town, we were taken to the adjoining railway goods shed which belongs to that firm. There, drawn up on the platform, were the first rail tank wagons of wine ever to reach England. Each of them had brought 880 gallons of wine straight from the vineyards of the South.—*"Peterborough" in "The Daily Telegraph."*

Matterhorn Cable Railway

It was stated last October that action was to be taken by the International Union of Alpine Associations to save the Matterhorn from commercial exploitation by a number of Italian business men who intended to build a cable railway to the summit. The matter is now entering a new and decisive stage as Italian reports say that permission has been granted for the building of the cable railway to the Italian summit.—*From "The Times."*

Trip for Rail Fans

More than 500 railway fans are expected to book tickets for a special half-day excursion from Lancashire towns to York Railway Museum on July 1. The London Midland Region has arranged for the train to be hauled by the last of the 75 former Lancashire & Yorkshire Railway "Hughes" 4-6-0 locomotives now in service. The train will serve Blackpool, Preston, Chorley, Bolton, Manchester, Rochdale, and Todmorden.

20 Miles to go 100 yd.

Fire engines and ambulances will have to travel 20 miles to reach premises 100 yd. from their bases if British Railways carry out a plan to close Vauxhall Station Road Bridge at Great Yarmouth for repairs. The council is protesting against the move. Buses and taxis will be unable to reach the station and passengers will have to carry their luggage over a footbridge.—*From the "Daily Mail."*

Festival Trains

(Seven new trains link London with Festival centres in Scotland, Stratford-on-Avon, Liverpool, Bristol, etc.)

We were informed, the other day,
That we should due attention pay
To certain admirable trains,
The product of the brightest brains,
Which will ensure that one and all
Who come to grace the Festival
Will go home suitably impressed
That British Railways are the best.

Scotland gets two—no doubt that's wise—
Glasgow won't need to blast the eyes
Of Edinburgh, and *vice-versa*,
In broadest Scots or something terser;
But all along the Ship Canal
There is a sadder tale to tell,
As Manchester belabours those
Who robbed her of her sweet "Red Rose."

Art for adventure, lad? Go west
With Long John Silver and the rest;
Who knows what treasure may be found
If once your steps are Bristol-bound?
Do you seek magic? Then the Bard
Will take you swiftly Stratford-ward.

Or would you wander far and wide
About the Hardy countryside,
Or walk through poppy-land with me,
Beside the sand-fringed, grey North Sea?

Biff says, and Buff, of course, agrees,
That, if you fancy cushioned ease
When you are in a roving vein,
You will be wise to take a train.

A. B.

OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

SOUTH AFRICA

New Line in Transvaal

A new line between Grootvlei and Redan in the Transvaal will be officially opened for all classes of traffic by the Minister of Transport in mid-July. It was opened throughout for coal traffic under construction conditions in January, 1951.

With inadequate coal reserves at the Springfield colliery near Redan, it became necessary to make other coal resources available for the Klip power station. This station generates more than 50 per cent. of the power for industrial requirements in the Transvaal and also supplies power to the Free State goldfields. To deliver coal at Redan as economically as possible a direct railway has been built. The line was built to pass Platkoppies so that at some future date, when circumstances warrant, a connection can be built between Heidelberg and Platkoppies to give a through distance by rail from Heidelberg to Redan of only 33½ miles.

In addition to coal and other traffic this line will carry a moderate tonnage of through traffic from the Natal main line north of Ladysmith to Vereeniging. The saving in through railway distance from Balfour North to Vereeniging *via* this line compared with the present route *via* Union Junction is 28 miles.

Construction of the Redan-Grootvlei line was begun in May, 1949, and completed at an estimated cost of £1,791,000, or an average cost of £45,275 per mile. The ruling gradient is 1 in 100 compensated in both directions. The line is built to main line specifications and is 40 miles long. Two bridges had to be built, and a dam, with a capacity of 85,000,000 gal., to supply water for the railway.

CANADA

Newfoundland Developments

Mr. Donald Gordon, Chairman & President of the Canadian National Railways, in a recent address in St. John's, Newfoundland, said that the Newfoundland railway and its associated facilities when entrusted to the Canadian National showed evidence of having been managed by capable railwaymen, but like all railways it had suffered from the financial famine of the depression era and from serious shortages of materials and manpower since the war. The physical condition of the line was far below the average Canadian National Railways standard at the time it was taken over by the Federal Government.

This had made necessary an expenditure of large capital sums on Newfoundland lines. New stock received or on order totalled 483 units, representing an investment of $2,639,252. The working staff has been increased by about 800 men, and all employees have received the scale of wages, pensions, and other emoluments in force on C.N.R. lines elsewhere. With 4,500 employees the system is the largest single employer of labour in the province.

There was no possibility in the foreseeable future of a change from narrow to standard gauge in Newfoundland. Practical necessity and traffic potential did not justify the great expenditure involved. A new ferry between North Sydney and Port-aux-Basques was expected to go into service in less than two years. It will make a round trip every 24 hours, including time out for loading and unloading, and be able without difficulty to plough through heavy floe ice in the Cabot Straits. The capacity of the vessel will be 300 persons, 75 cars, six lorries, two trailers, 50 head of cattle and 650 tons of cargo each trip.

A new dock will be built at Port-aux-Basques and the facilities at North Sydney will be extended and improved. The mechanised handling of freight will be made possible. The cost of the ferry and terminal facilities will be between $8,000,000 and $9,000,000, and when completed it is claimed that the service will be the most modern ferry operation known.

ITALY

Developments in Sicily

In addition to the electrification of the Messina-Palermo main line between Messina and Castroreale developments planned or in progress on the State lines in Sicily include improvements to Messina Central and Marittima (ferry) passenger stations, construction of a further section of the new line from Alcantara (on the Messina-Syracuse main line) to Randazzo (on the Circumetnean Railway), doubling of part of the Messina-Palermo line, and the setting up of railway information offices for passenger and goods traffic in principal towns throughout the island.

Through third class coaches now run *via* the Straits of Messina train ferry between Rome and Palermo and Syracuse, in addition to the through sleeping cars and first and second class ordinary coaches which have been running for many years.

Abundant citrus fruit crops in Sicily have resulted in abnormal demands for wagons and for space in the wagon ferry, several sailings of which have had to be reserved for freight traffic in recent weeks.

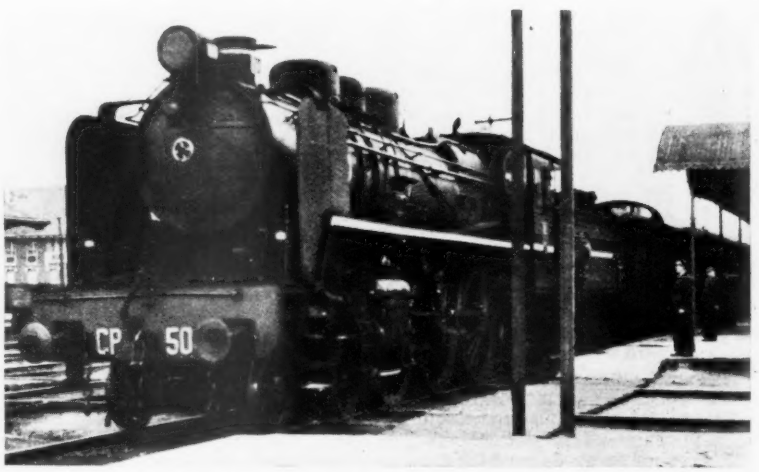
FRANCE

50-cycle Electrification Extended

The equipment of the line from Aix-les-Bains to La Roche-sur-Foron for single-phase traction at 20,000 V., 50 cycles, has been completed by the opening of the section between Annecy and La Roche-sur-Foron on May 19. M. Armand, General Manager of the French National Railways, travelled in the inaugural train and made part of the journey in the cab of the prototype 50-cycle locomotive CC 6051 (which was described in our December 29, 1950, issue).

At Annecy, on the return journey, M. Armand announced that it was intended to extend the electrification from La Roche-sur-Foron to Annemasse and to Le Fayet-St. Gervais. A map of the line and connecting railways appeared in our February 24, 1950, issue.

"Sud Express" in Portugal



Lisbon portion of the "Sud Express" at Pampilhosa, Portugal, hauled by Henschel-built 4-6-2 locomotive

Photo] *[R. Bisagno*

Postwar Works at Port Talbot, Western Region

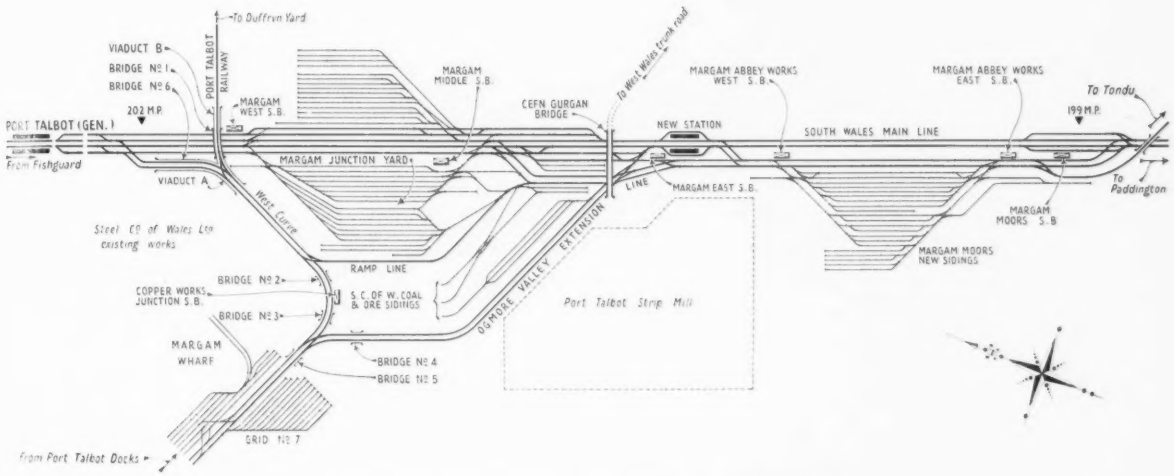
Extensive railway developments in connection with Port Talbot strip mill

THE postwar expansion of the works of the Steel Company of Wales Limited at Port Talbot, Glamorgan, has necessitated railway works costing about £1,100,000. They consist, for the most part, of an expansion of existing siding accommodation and the diversion of lines to make room for and provide additional facilities for a new 80 in. hot strip mill and the consequent alterations and extensions of the existing works. Signalling arrangements necessary have included five new signal boxes.

The strip mill is built on what was originally marsh land, now filled in throughout the site to an average depth of 7 ft. This site is particularly advantageous because of its vicinity to the steel company's existing works, and to the facilities provided by the port and railway for importing iron ore and bringing in home-produced coal and ore respectively. The site of the railway works which, for the most part, border on the South Wales main line, extends over a length of three miles. A survey was undertaken in 1945 and a scheme was devised in conjunction with the Steel Company of Wales Limited as shown on the accompanying diagram.

A large group of 21 new sidings is provided at Margam Moors, having a total capacity of 882 10-ton wagons. The existing yard at Margam Junction was completely remodelled and extended; 18 sidings were provided with a capacity of 815 10-ton wagons. In addition to the normal traffic all incoming home-produced iron ore, limestone and coal supplies will be dealt with in this yard.

Coal is exported from the Port Talbot docks, and the lines carrying this traffic from the collieries had to be extensively diverted. First, the old West Curve, which was originally at ground level and carried traffic, from the Swansea direc-



Completed new layout of running lines and sidings

General view of new viaducts carrying diverted Port Talbot Railway over main line; in the centre background, the existing works of the Steel Company of Wales Limited

Centering for arches of viaduct "B" in progress

tion, off the South Wales main line to the Port Talbot docks had to be moved southwards and also raised to a high level to enable unimpeded rail access to be obtained by the Steel Company from the existing works to the strip mill through bridges Nos. 3 and 4 and for slag tracks at bridge No 5.

In addition, the Port Talbot Railway, a single line from Duffryn Yard and its locomotive shed, used to cross over the main line at 201m. 67ch. and drop down to meet the West Curve on its way to the Docks. This has now been diverted by means of the three-arch viaduct "B" over part of a school playground and over the main lines at bridge No. 1 to join with the new West Curve on viaduct "A" from where traffic may be diverted either to the Docks or down the new ramp line embankment to the Margam Junction yard and the Cefn Gurgan Bridge area. A viaduct approach was made necessary on either side of bridge No. 1 on the Port Talbot Railway because of the proximity of a school on the east side and two gas holders on the west side.

Secondly, the Ogmore Valley Extension line, originally a single line carrying coal traffic from the Ogmore Vale and running alongside the main line from 199¼m. to 201½m. and then curving round to join with the old West Curve to the Docks, was doubled from the 199¼ mile-post and, after passing under Cefn Gurgan Bridge, was diverted to the west to make room for the Steel Company of Wales Limited coal and ore sidings. This line passes over bridge No. 4 and joins with the new West Curve to the Docks. In consequence of this new approach to the Docks it was also necessary to remodel the sidings in grid No. 7. Road access to the new strip mill is provided from the main West Wales road over Cefn Gurgan Bridge, spanning the main and the Ogmore Valley Extension Lines, and also under bridge Nos. 6, 3, and 4.

A new station at Margam has been constructed at 201m. 45 ch. to serve the strip mill. It consists of two island platforms, 500 ft. long, constructed of reinforced concrete units. The station buildings include a separate booking office and switch room at rail level, with direct access from the strip mill and access to the platforms by a reinforced concrete footbridge. On the platforms, lavatory accommodation and waiting shelters are provided.

As the platforms are exposed, as much protection from the wind as possible is required. The shelters have seating on both sides of a central wind shield, the structure returning at the ends of the seats to enclose them on three sides. The main structure of the shelters is in reinforced concrete finished by the exposure of the aggregate; the wind shield above seat level has alternate glazed panels and poster panels; the seats are hardwood strips on concrete supports.

In the design of the buildings and the treatment of the details, an effort has been made to tone with the architecture of the Steel Company of Wales Limited substation, which was designed by Sir Percy Thomas & Sons and is immediately adjacent to the station. Tondu buff facing bricks are used so that the buildings will harmonise. Simple, robust interior finishes used have a pleasant appearance and also stand up to the continual heavy wear demanded of a station entirely used by industrial workers.

Drainage Works

As the area immediately east of the main lines is low-lying and the sea lies about 1½ miles to the west, drainage was an important feature of the scheme. Three new culverts were constructed and ten existing culverts extended, generally in reinforced-concrete piping ranging from 3 ft. to 6 ft. in diameter, surrounded by concrete where passing under tracks. In addition, about 850 lin. yd. of pipe drains were laid, and the diversion of 150 yd. of existing 18 in. town sewer and the strengthening of a 4 ft. dia. main town sewer passing under the new West Curve were carried out. The Steel Company of Wales Limited has installed pumping stations to enable all surface water to drain to the sea.

The survey, boreholes and test piling revealed that firm gravel underlay the sites of all the new bridges and retaining walls, being near the surface at the 202 mile-post and dropping away to the south where, at bridge No. 5, it was about 40 ft. below ground level. This provided a sound footing for piles where the gravel was deep down and for mass concrete foundations where it was near the surface.

Detailed planning and programming of the works required special attention

Completed rings, viaduct "B"

to ensure adequate facilities at all points throughout and to safeguard the interests of all departments at all times. Two main stages were determined before construction work began.

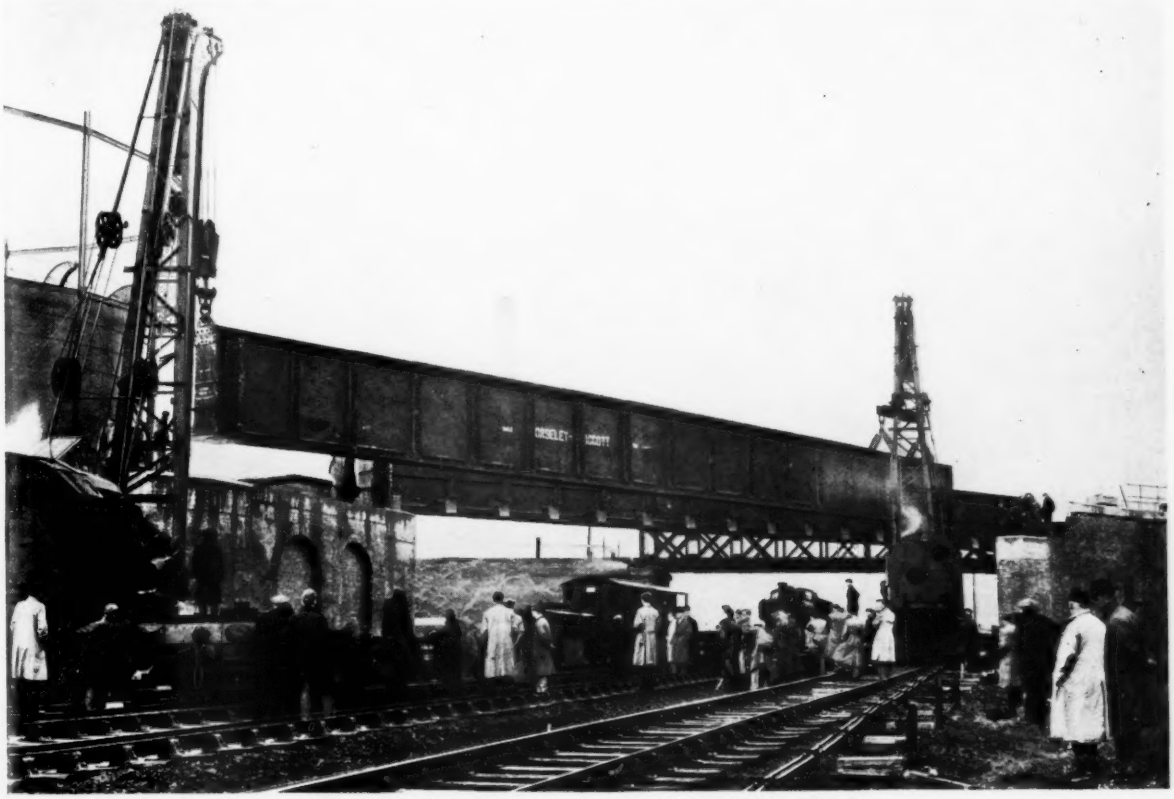
The first stage included viaduct "B," bridges Nos. 1, 4 and 5, part of viaduct "A," and the necessary drainage and earth works to permit the diversion of the Ogmore Valley Extension line and a branch off the Port Talbot Railway leading to Margam Junction yard being brought into use, also the doubling of the Ogmore Valley Extension line from Margam Moors to Cefn Gurgan and over half of Margam Moors Sidings.

The second stage included the completion of bridges Nos. 2 and 3 to open up the new West Curve, also of viaduct "A," bridge No. 6 and the retaining walls carrying the new West Curve, the remodelling and extension of Margam Junction yard and completion of Margam Moors Sidings. Viaduct "B" consists of one 45 ft. span six-ring brick arch, flanked by two 30 ft. span four-ring brick arches. West's 17½ in. dia. *in situ* piles were used in the foundations to expedite the work. The piers are of solid brickwork, and the viaduct is built on a curve of 705 ft. radius.

Bridge No. 1, a single-track through-bridge of 58 ft. 6 in. square span and 105 ft. 7½ in. skew span, consists of two main plate girders 120 ft. 6 in. overall, weighing 59 tons each, cross girders, with jack arches spanning between, and concrete filling provide the deck. The erection of this bridge was carried out on a Sunday with the assistance of two 45-ton cranes, necessitating only the minimum of interference with traffic.

Thirteen 30 ft. span five-ring brick arches form viaduct "A," which runs on

Erection of cross-girders for bridge No. 1



Erection of Paddington-end main girder, bridge No. 1

a compound curve of radii varying from 720 ft to 3,335 ft. This structure is founded on 14 in. × 14 in. precast concrete piles. The construction of the arches was carefully staged to prevent undue out-of-balance thrust on the piers. Three sets of lagging were erected and the arches formed to the quarters; concrete filling was carried out before the first arch was completed. The second arch was keyed up before the first set of lagging was removed and placed in position for the fourth arch. The curved centre line of the viaduct was set out at 2 ft. horizontal intervals on the lagging as work proceeded, and from the existing works to the strip mill are similar in construction. Their superstructure consists of two main girders, 91 ft. overall in bridge No. 4 and 84 ft. 1½ in. overall at bridge No. 3, with cross-girders, jack arches and concrete filling as in bridge No. 1.

The site of bridge No. 4 is in an area in which blast furnace slag had been tipped for many years. Some 23 holes were drilled 16 ft. deep and blasting was carried out on the site of the south abutment to shatter this slag, which had been tipped above the old saltings level. It was still found impossible to drive piles for this abutment through the slag, which had to be excavated and the area back filled with ashes before piles could be driven to the underlying gravel. The superstructure of bridge No. 5 differs from those previously mentioned in that three main girders carry the double track and the deck is formed of steel joists with concrete filling between.

Bridge No. 6 is in two portions side by side, that carrying the four tracks of the South Wales main line and that carrying the new West Curve at a higher level. The abutments of the main-line portion which are founded on gravel were constructed in timbered trenches driven underneath the tracks temporarily supported by steel joists. When the abutments, including their concrete bed courses, had been completed, the tracks were taken up during Sunday occupation, and after removal of sufficient dumpling the superstructure of precast composite units, was laid in position by cranes and the tracks relaid. The square span of this bridge is 27 ft., providing for roadway and footpath underneath it. The new West Curve portion has mass concrete foundations, and the superstructure consists of two main girders carrying cross-girders, railbeams and steel plate decking.

The retaining walls to the new West Curve rising from the main line to

Bridges Nos. 3 and 4 crossing company's sidings

a smooth curve on the spandril wall and arch edge was obtained throughout.

Bridge No. 2, a deck bridge of 29 ft. span carrying the new West Curve over two of the Steel Company of Wales Limited tracks, has piled foundations and reinforced concrete pile caps. The abutments, as those of all the bridges, are brick faced with concrete backings; this also was the method of construction of the retaining walls. The superstructure consists of five main girders with precast concrete jack arches and in situ filling. Bridges Nos. 3 and 4 which carry the new West Curve and Ogmore Valley Extension line respectively over the Steel Company of Wales Limited main access road and tracks bridge No. 6 are for the most part founded on piles, but at one end the gravel was sufficiently near the surface to make mass concrete foundations an economical proposition.

Material for Earthworks

Approximately 1,000,000 cu. yd. of material were required for earthworks on the railway works, for which a large quantity of sand was obtained locally from a disused embankment; where materials could not be found locally ashes were brought by rail.

All work on the permanent way points and crossings was carried out by the District Engineer and that on the

(*Continued on page* 701)

Postwar Works at Port Talbot, Western Region

Viaduct "A" under construction in foreground: Completed bridge No. 1 in centre

Viaduct "A" on right rising to join line over bridge No. 1, which crosses main lines in centre

Viaduct "A" from west side: in foreground sidings serving Steel Company of Wales Limited existing works

Light Tunnel for Examination of Locomotives

A permanent structure providing protection from the weather and equipped with fluorescent lighting

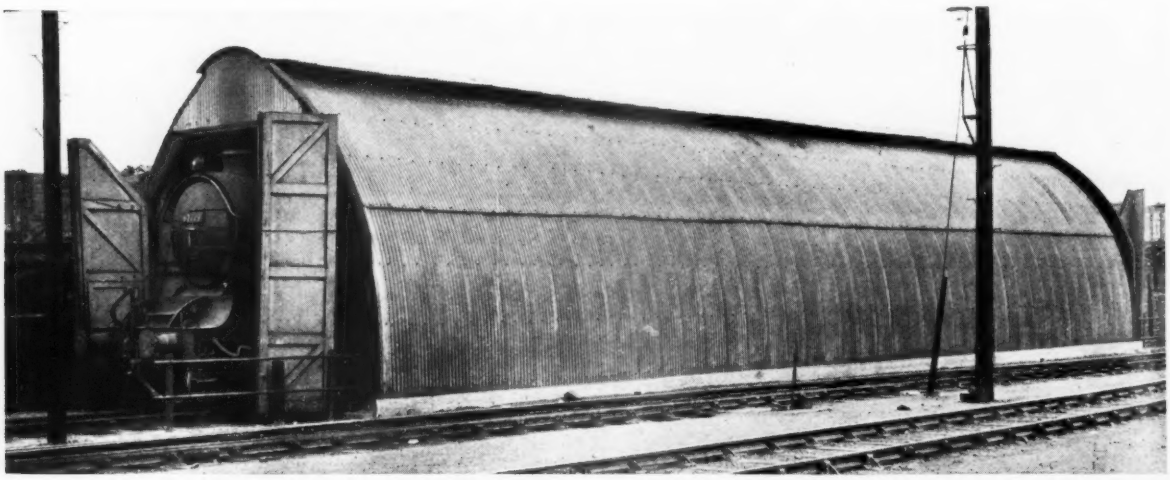
A LIGHT tunnel for the inspection of locomotives has recently been completed and brought into service at the Thornton Motive Power Depot, Scottish Region, British Railways. During the war, light tunnels of somewhat similar design were installed on the former L.N.E.R., and were described and illustrated in our May 19, 1944, issue. These were designed specifically to comply with the blackout conditions then prevailing, and were installed to avoid delay in the examination of locomotives operating under wartime conditions. A feature of the design was the fitting of master switches which cut out the main lighting system as soon as the doors were opened.

The Thornton light tunnel is situated near the entrance to the depot and has been placed approximately 186 ft. on the approach side of the mechanical coaling plant to which the locomotives pass on the completion of examination. The structure is 96 ft. 6 in. long overall and 17 ft. 10½ in. wide at floor level. Due to restrictions in materials, old rails have been used extensively in the skeleton frame of the building.

The exterior of the building consists of Everite asbestos cement corrugated sheeting curved to 15 ft. 6 in. radius, bolted to 5-in × 3-in wood purlins at 3-ft. centres. The frame is carried on a concrete foundation 20 ft. 9 in. in width.

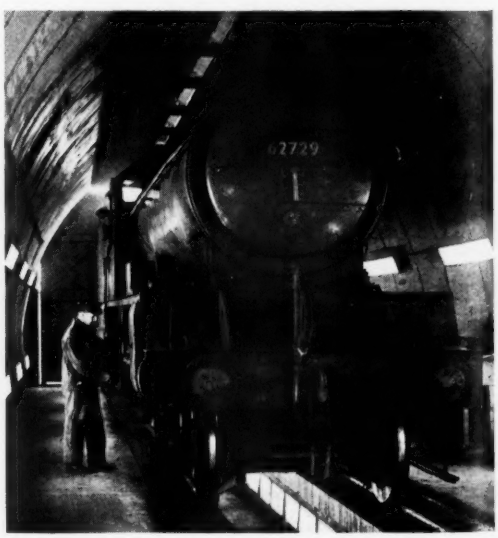
The roof of the smoke vent is constructed of asbestos corrugated sheeting attached to steel angles 3 in. × 2 in. × ⅜ in. The inspection pit is 76 ft. 4 in. long and 3 ft. 3½ in. deep to floor and rail level. The interior of the building consists of flexible sheeting attached to 2-in. × 1¼-in. wood battens.

The inspection pit is equipped with fluorescent lighting, fitted into pre-cast light boxes, and runs the entire length and on each side of the pit. The

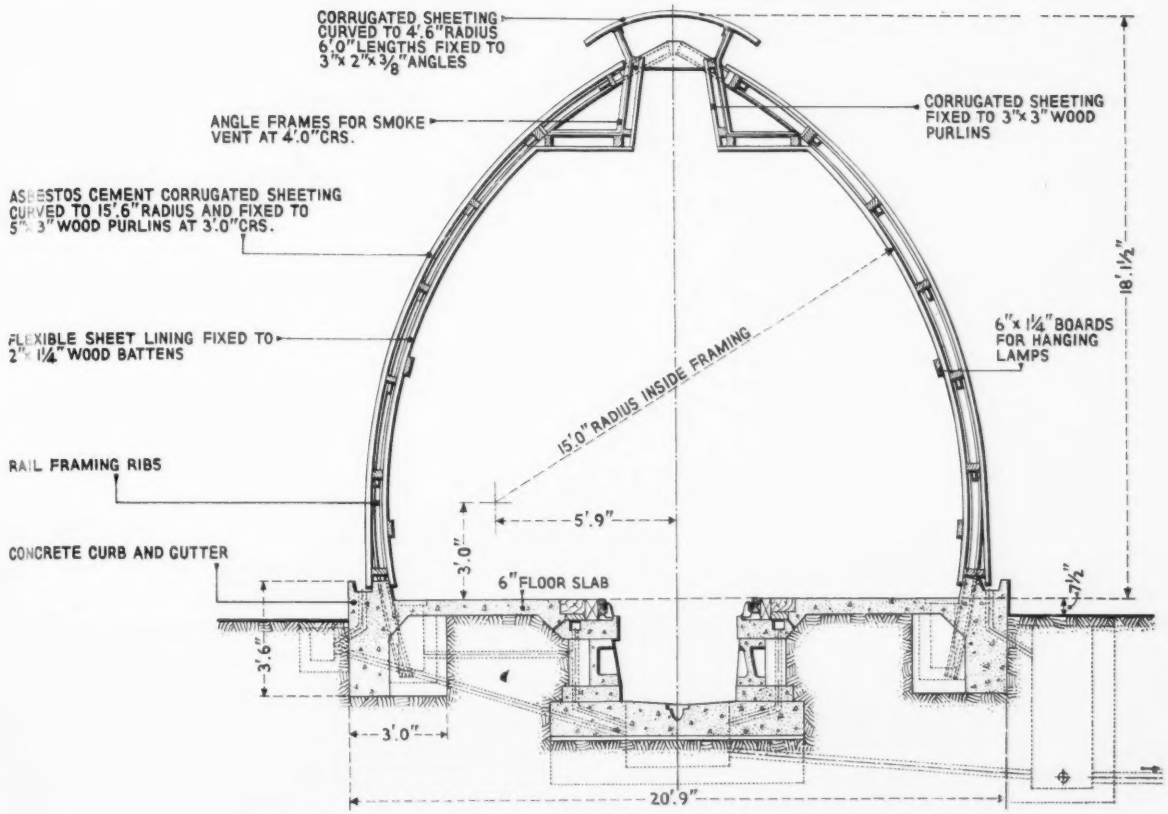


Light tunnel erected by the Scottish Region at Thornton Motive Power Depot

Interior view of the new light tunnel looking towards the mechanical coaling plant



A locomotive undergoing examination in the tunnel by fluorescent lighting



Sectional diagram showing dimensions and constructional detail of the light tunnel

lighting is such that all glare and shadow are eliminated, enabling any defects between the engine frames to be readily detected. For the examination of the outside of the locomotive 13 lighting units are fitted on each side of the interior walls. The examination pit is connected to the main drainage system. The floor consists of 6-in. concrete slabs, and the building is enclosed by wooden folding doors. Complete protection from the weather is provided.

Mobile Crane with an Articulated Jib

AN addition has been made to the range of mobile cranes manufactured by F. Taylor & Sons (Manchester) Ltd., and is known as the Jumbo Mark III. This new crane is provided with an articulated jib and hydraulic jack which permit controlled movement of the outer jib independent of the main jib.

Such an arrangement permits the crane to work under a ceiling height of 10 ft. 4½ in. when used as a crane or 10 ft. 7½ in. when the hook is fitted with auxiliary equipment when using a grab and so on. The independent movement of the front jib provides additional reach compared with the earlier models.

A further advantage claimed for the new crane is its ability to work in a confined space. The crane hook can be controlled fore and aft from the driving seat without complete vehicle movement. Also, crane loads can be carried closer to machines, which is an advantage when using stillages. The crane has a turning circle of 14 ft. 6 in. radius and the minimum turning circle over the jib is 13 ft. Easy steering and fast manœuvering speeds are other features of the crane.

Crane with an articulated jib and hydraulic jack

Reconstruction of Sloane Square Station

London Transport District Line station rebuilt after severe war damage

ON November 12, 1940, hardly six months after it came into use, the new Sloane Square Station on the District Line of London Transport, was destroyed by a direct bomb hit. The restoration has been carried out in several stages. Immediately the clearance of debris and the reconstruction of the tunnel headwall permitted, a temporary wooden ticket hall was constructed and passages enclosed in hoardings provided for access to and from the platforms. Because of the destruction of the glass and timber portions of the original barrel-vault roof, temporary roofs of corrugated iron on timber frames were erected over the platforms. The destruction of the two new escalators meant the reversion to the old staircases for the exits.

The decision after the war to rebuild the station necessitated the removal of these temporary works. A new temporary structure was erected a little to the east, with a ticket hall in Holbein Place connected to the platforms by wood and asbestos staircases on steel framing and roofed with corrugated iron.

Structural Variations

The new station, opened in May, is similar to the bombed structure—the ticket hall, staircases, and escalators are reinstated in their original positions—and the original contract drawings formed the basis for the new works. One important variation is an exit into Holbein Place. Another variation, but only as a temporary expedient, is the retention of the wooden and asbestos ticket hall and staircases for additional exits during the period of the Festival. (A special bus service runs from the station to the Battersea Park fun fair and gardens.)

Despite the close adherence to the original designs, the station presents (particularly at platform level) a different appearance from formerly. During the present reconstruction, the wrought-iron arch ribs which since 1868 carried the glass and timber roof were removed to allow for future decking over, and platform roofs of conventional railway pattern have been built on the line of the former temporary erection. The escalators, formerly open to the platforms, are now enclosed above platform roof level; in addition, the consequent rearrangement of platform furniture and fittings has contributed towards the changed appearance.

The station building forms a street-level portal and ticket hall, connected by staircases and escalators to the sub-surface platforms. The whole structure is designed as a plinth for a future block of buildings above.

The original sub-structure, carried on piled foundations, was intended to support such a block and, with the steelwork decking over the tracks, was relatively undamaged by the bomb. It was therefore possible to erect the new superstructure on this original steelwork. When the pre-war reconstruction was undertaken, the original station was lengthened by 67 ft. by extending the platforms and by removing part of the original tunnel headwall at the west end; over this site the steelwork raft was constructed to carry the new ticket hall.

In addition to the usual booking facilities, the new structure provides for the reinstatement of tobacconists' and newsagents' kiosks as well as the street-level buffet which was a well-known feature of this station before the war; the site of the two last mentioned is, however, being used for additional ticket offices during the Festival. Other accommodation at street level includes a clerks' room, a ticket store, and a switch-room. Staff lavatories are accommodated in the basement.

As an annexe to the station on the north-east side, a staff canteen with seating for sixty has been built, to replace the hut canteen on the westbound platform. At platform level no new accommodation has been provided, but the stationmaster's office and various staff rooms have been renovated.

Finishings

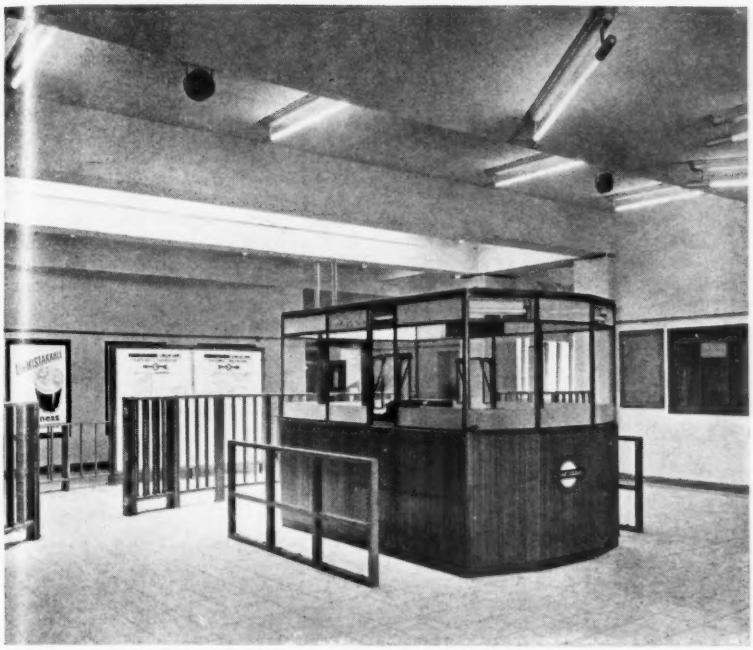
The frontages are finished above lintel level in cream hammered Granitex; below a golden yellow terrazzo string course are grey Granolithic plinths and black terrazzo surrounds to the shop-fronts, and black tile poster panels. Both entrance and exit doors are flanked by curved walls with quarry tile facings.

Exterior of station showing entrance in Sloane Square and exit in Holbein Place

The appearance of the Holbein Place elevation has been greatly enhanced by concrete mullion windows, with fluted glass, instead of the former metal windows; below the mullions the walls are faced with grey Granitex. Shutter type gates, painted a light grey, are provided at both openings, each of which is canopied in reinforced concrete. The flat station roof is of asphalt on screed with a 9-in. parapet above.

Despite the irregular shape of the site, the ticket hall has been designed to present a balanced appearance; the main ticket office in the centre is flanked by a staircase (down) and an escalator (up) on each side. This arrangement, with the buff and pink colour scheme, the general layout of the passenger barriers, the provision of a concrete light in the ceiling, and the general use of fluorescent lighting give an impression of spaciousness and light to the ticket hall.

The floor is tiled with 12-in. × 12-in. pressed cement tiles of a neutral shade,



Ticket hall from the station entrance

in turquoise green. Because of the accumulation of old lime wash on the platform walls, these were hacked by mechanical hammer and a special cream stone-face render applied, poster panels being adapted from the old ones, with painted frames. Above the platform roofs, the damaged parapet wall has been brought up to its original level and the coping restored.

The staircases were amongst the least damaged parts of the station, and where possible the original buff faience tiling has been retained. New upper flights have been built to both stairways and are finished in 12-in. × 8-in. buff tiles to match the new works.

Prestige & Co. Ltd. was the general contractor. The steelwork was supplied by Dawnays Limited and erected by Askham & Palin Limited. Escalators were supplied and installed by Waygood-Otis Limited. The work of making good dilapidation of the platform structure and surfaces was carried out by the London Transport Executive which also installed the fluorescent lighting throughout. The works were carried out to the design of the London Transport Executive Architect under the general supervision of the Chief Engineer, Mr. P. Croom-Johnson.

and walls up to lintel level in 12-in. × 8-in. buff tiles. Above the lintel the wall is of stippled plastic paint, finished in pink. For the kiosks and the site of the future buffet, temporary bitumen floors have been provided. Hardwood barriers, of Brazilian teak, have been erected in an arc beyond the ticket offices. Bronze rails and barriers separate the stairways from the escalators.

Platform Features

At platform level, the splayed headwall of the tunnel is framed by the building above it and the escalators on each side. The surface of the headwall, of brick rendered with a stone finish, is broken by the louvred vents to the two escalator machine chambers and by the aluminium-frame windows to the clerks' room above. The escalator enclosures, of lightweight construction, contain windows of obscured glass in hardwood frames, and lead to dormers at ticket-hall level with aluminium-framed windows to match those over the headwall.

Platform roofs are of steel framing, with asbestos decking and patent glazing at intervals. The ceilings are finished in off-white and the supporting steelwork

Top of new escalator at Sloane Square from eastbound platform; stairway to platform shown on left

Postwar Works at Port Talbot, Western Region

(*Concluded from page* 696)

plain line by the contractor; in all, some seven miles of running lines consisting of secondhand rails on new sleepers, and fifteen miles of sidings consisting of secondhand rails on concrete block sleepers were laid. Extensions to the existing water supply have been carried out by Mr. K. J. Cook, Mechanical & Electrical Engineer, Western Region.

In connection with the increased capacity of the Steel Company of Wales Limited ore stockyard and blast furnaces, a subsidiary contract was let for the extension of Margam Wharf. The existing reinforced concrete structure which was erected in 1925 to a total length of 875 ft., has been extended to 950 ft. with provision for future extension of a further 325 ft. at the north end. The extension carried out will allow three ships of about 5,000 tons each to be berthed.

Sir Robert McAlpine & Sons (South Wales) Limited were the main contractors for the railway work described. The work was begun in July, 1947, and completed in October, 1949.

New Motorship for Isle of Wight Service

M.V. "Shanklin," the third screw-driven vessel for this route, is the first to be built for it with one-class accommodation

A NEW motorship, the *Shanklin*, joined the Southern Region fleet of vessels operating between Portsmouth and Ryde, Isle of Wight, on June 18. The *Shanklin*, which was built by Wm. Denny & Bros. Ltd., is the third new ship to be brought into this service since the war, and is the first to be built for this route with one-class accommodation, though other vessels on the service have been operating with this arrangement since June 1. The *Shanklin*, replaces the paddle steamer of the same name, which was recently withdrawn from service after a career of 26 years.

The new vessel is a sister ship to the *Southsea* and the *Brading*, which were also built by Wm. Denny & Bros. Ltd. and put into service in 1948. Since their introduction, these two vessels have carried a large number of passengers at a greater speed and in greater comfort than previous vessels on the service. In appearance the *Shanklin* is almost identical to its two predecessors, but minor alterations have been made in the design and as a result the passenger capacity has been slightly increased. Principal dimensions of the new vessel are:—

Length overall	200 ft.
Breadth moulded	46 ft.
Draft	7 ft.
Gross tonnage	965

Accommodation is provided for 1,377 passengers and a crew of 33; the vessel has a speed in service of 14½ knots. Propulsion is by twin screws directly driven by two Denny-Sulzer eight cylinder diesel engines, each of 950 b.h.p. Steering is by two rudders operated by electro-hydraulic steering gear with telemotor control.

The *Shanklin* has a raked stem, cruiser stern, streamlined funnel and a tripod mast. Passenger accommodation includes a large area on the promenade deck where there is considerable seating available. On the main deck aft there is a combined refreshment room and lounge panelled in mahogany with attractive seating, and a well-fitted bar and buffet. A ladies' lounge opens off the refreshment room.

Forward of the refreshment room on the main deck is good seating accommodation under shelter. On the lower deck aft is a tastefully decorated lounge with seats, tables and chairs, and on the same deck forward there is another refreshment room and bar. Officers' accommodation is on the promenade deck and that for the crew on the main and lower deck forward.

Radar is installed in this vessel, as in the case of the *Southsea* and *Brading*, where it has proved advantageous.

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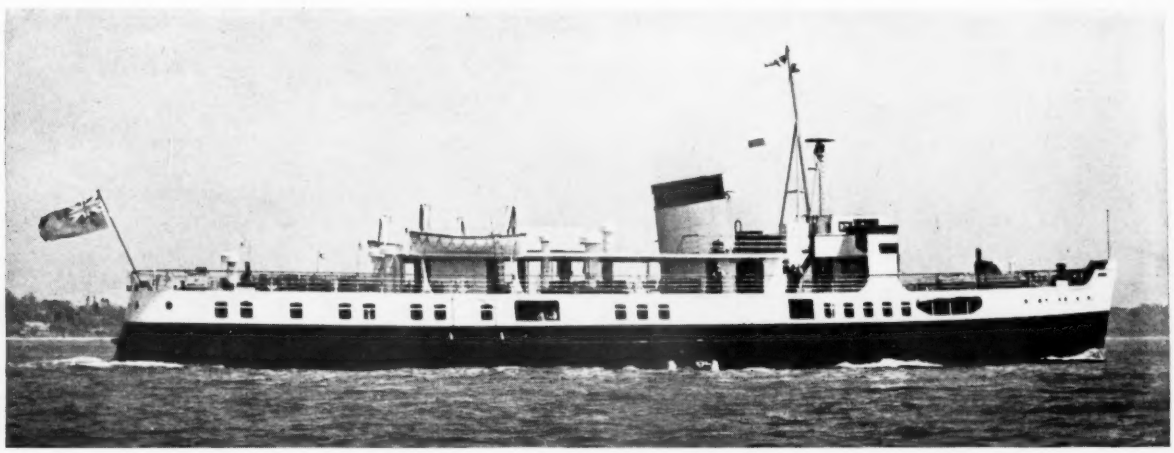
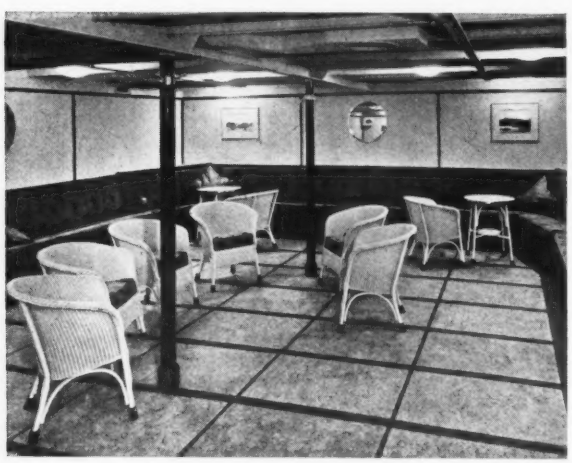


New Southern Region motorship "Shanklin" for the Portsmouth—Ryde, Isle of Wight, service



General lounge

After saloon

RAILWAY NEWS SECTION

PERSONAL

Mr. F. W. Aickin, General Manager of the New Zealand Government Railways, is retiring at the end of July.

Mr. H. G. Ivatt, M.I.Mech.E., Chief Mechanical Engineer, London Midland Region, who is retiring at the end of this month, is the son of the late Mr. H. A. Ivatt, who was Locomotive Engineer of the Great Northern Railway, from 1895 to 1911. Mr. H. G. Ivatt was educated at Uppingham School and obtained his railway training with the former London & North Western Railway at the Crewe Works. After a period in the drawing office he became Assistant Running Shed Foreman at Crewe; subsequently he took charge of experimental locomotive work; and later he was appointed Assistant in the Outdoor Machinery Department. During the war of 1914-18 he served on the staff of the Director of Transport in France, and attained the rank of Major. On returning to this country he became Assistant Locomotive Superintendent of the former North Staffordshire Railway at Stoke. Consequent on the amalgamation and the closing of the works at Stoke, he was transferred to Derby and appointed Works Superintendent of the Derby Locomotive Works in May, 1928. From the beginning of August, 1931, the Outdoor Machinery and Fire Sections of the Midland Division also came under his control. In November, 1932, he was appointed Divisional Mechanical Engineer, Glasgow. Mr. Ivatt was appointed Principal Assistant for Locomotives to Chief Mechanical Engineer in August, 1937, and Chief Mechanical Engineer in 1946.

We regret to record the death on June 17, at the age of 77, of Mr. A. G. Hubbard, Solicitor to the Great Western Railway from August, 1919, to September, 1940, and afterwards Chief Legal Adviser to the company until his retirement in December, 1940.

C.I.E. Appointments

The following appointments have been announced by Coras Iompair Eireann:—

Mr. J. J. O'Dwyer, Chief Rates Clerk, to be Commercial Superintendent.

Mr. A. M. Plumer, to be District Engineer, Dublin.

Mr. K. G. Brady, to be Assistant District Engineer, Waterford (temporary).

Mr. J. P. Dalton, to be Assistant Engineer—Canals.

We regret to record the death on June 14 of Mr. A. K. Muirhead, Controller of Stores, North Western Railway, India, from 1935 to 1941.

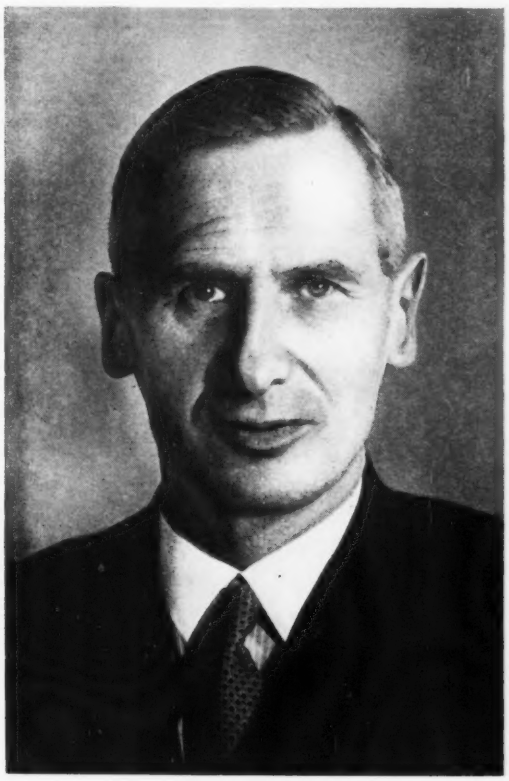
The Eastern Region has announced that Mr. G. F. Huskisson, Head of Development & Statistical (Passenger) Section, Commercial Superintendent's Office, Liverpool Street, has been appointed Assistant District Goods Superintendent (London Suburban), Gordon Hill.

Mr. Miles Beevor, J.P., B.A., M.Inst.T., who, as recorded in our June 8 issue, is relinquishing his appointment as Chief Secretary & Legal Adviser to the British Transport Commission on June 30, to become Deputy Managing Director of the Brush Electrical Engineering Co. Ltd., was educated at Winchester and at New College, Oxford, and was a Scholar of both colleges. He was admitted a solicitor in 1925, and was a Partner in the firm of Williams & James from 1925 until he took up his appointment as Chief Legal Adviser to the L.N.E.R. in 1943. He was also a Director of the Legal & General Assurance Society Limited from 1933 until he resigned from the board in 1943. Mr. Beevor became, additionally, Solicitor of the L.N.E.R. in England, and in June, 1947, he was appointed Acting Chief General Manager. A few months later it was announced that he had been appointed Chief Secretary & Legal Adviser to the British Transport Commission, and the L.N.E.R. released him to take up that post from September 29, 1947. He has been a Director of the Solicitors' Benevolent Association, and is a J.P. for Hertfordshire. Mr. Beevor served in the R.A.F.V.R. from April, 1911, to November, 1942, and held the rank of Acting Flight-Lieutenant.

Elliott] [& Fry

Mr. H. G. Ivatt

Chief Mechanical Engineer, L.M.S.R., and London Midland Region, 1946-51



Mr. Miles Beevor

Appointed Deputy Managing Director of the Brush Electrical Engineering Co. Ltd.

Mr. W. H. Scutt

Appointed District Traffic Superintendent, Southampton, Southern Region, British Railways

Mr. P. Stephenson

Appointed Assistant Regional Staff Officer, North Eastern Region

Mr. R. L. Vereker

Appointed District Motive Power Superintendent, Norwich, Eastern Region

Mr. W. H. Scutt, Assistant District Traffic Superintendent, Woking, Southern Region, who, as recorded in our May 18 issue, has been appointed District Traffic Superintendent, Southampton, joined the former South Eastern & Chatham Railway at Dover in June, 1908, and after 15 years at various stations and as a relief clerk was transferred to the District Office at Ashford in 1923. He remained in the District Offices at Ashford, Dover, and London Bridge until May, 1931, when he was appointed as Stationmaster, Birchington, and he then served as Stationmaster and Relief Stationmaster until his appointment as Senior Assistant Stationmaster at Victoria in 1940. In 1944, he was transferred to the London East Division as Acting Divisional Superintendent, and subsequently was appointed as Assistant to the London East Divisional Superintendent; later he became Assistant London East Divisional Superintendent. Mr. Scutt was transferred to the London West Division as Senior Assistant District Traffic Superintendent in 1947.

Mr. P. Stephenson, Assistant to Regional Staff Officer, North Eastern Region, who has been appointed Assistant Regional Staff Officer, joined the former North Eastern Railway in the Hull District Superintendent's Office in 1922. After being employed on railway and docks operating and staff work he was appointed to a Headquarters post in the Staff Section of the then Divisional General Manager's Office, York, in 1938. He subsequently served as Staff Assistant to the Traffic Officers for the Scottish Area of the L.N.E.R. at Edinburgh and in a similar capacity with the Operating Superintendent for the Southern Area at Liverpool Street Station, London. Mr. Stephenson returned to York in 1948 as Assistant to the Regional Staff Officer (Wages Grade Staff).

Mr. R. L. Vereker, District Motive Power Superintendent, Ardsley, Leeds, who, as recorded in our June 8 issue, has been appointed District Motive Power Superintendent, Norwich, Eastern Region, was educated at Trent College and afterwards received technical education at the Royal College of Science, Dublin. He entered the service of the former Great Northern Railway as a premium apprentice at Doncaster Locomotive Works in 1908, and, after experience in the various shops, became one of Sir Nigel Gresley's pupils. Mr. Vereker was appointed to his first supervisory post when he was given charge of the Copley Hill Shed in 1914. Shortly afterwards he joined the Forces and after four years' active service was appointed as Assistant to the District Locomotive Superintendent, in charge of the Bradford depot in 1919, followed by an appointment at Doncaster as Assistant to Works Manager. Mr. Vereker remained at Doncaster until, in 1941, he was transferred on loan to the Government factory at Dukinfield for a short period, returning to Doncaster later in the same year as Assistant to Locomotive Works Manager. He remained in the Chief Mechanical Engineer's Department until becoming Locomotive Shedmaster at Mexborough in 1944. He was appointed as District Locomotive Superintendent, Ardsley, in 1947.

Presentation to Mr. H. G. Ivatt

Mr. R. A. Riddles, Member, Railway Executive, made a presentation to Mr. H. G. Ivatt, who is retiring as Chief Mechanical Engineer, London Midland Region, at Derby, on June 5 (see accompanying paragraph)

The presentation to Mr. H. G. Ivatt, retiring Chief Mechanical Engineer, London Midland Region, which, as recorded in our June 15 issue, was made at Derby on June 5, followed the last Works Superintendents' Meeting to be held by Mr. Ivatt. The presentation was made at a luncheon following the meeting by Mr. R. A. Riddles, Member of the Railway Executive for Mechanical & Electrical Engineering, who for many years has had close association with Mr. Ivatt. Also present for this occasion were a number of Officers who at one time attended Works Superintendents' Meetings, but who have now left the London Midland Region. In the accompanying illustration are shown:—

Left to right: Messrs. C. S. Cocks, Chief Technical Assistant to the Chief Mechanical Engineer, L.M. Region; T. F. B. Simpson, Works Superintendent (Locomotives), Derby; E. J. Larkin, Staff Assistant to Chief Mechanical Engineer, L.M. Region; R. C. Bond, Chief Officer (Locomotive Construction & Maintenance), Railway Executive; A. E. Bates, Works Superintendent (Carriages & Wagons), Derby; R. A. Riddles; G. S. Bellamy, Mechanical & Electrical Engineer,

Scottish Region; I. C. Forsyth, Works Manager (Locomotives), Crewe; A. E. Robson, Carriage & Wagon Engineer, E. & N.E. Regions; D. Williamson, Works Superintendent (Locomotives), Horwich; M. S. Hatchell, Principal Assistant (Locomotives), L.M. Region; H. G. Ivatt; E. S. Cox, Executive Officer (Design), Railway Executive; E. Stanley, Assistant Carriage & Wagon Engineer, L. M. Region; E. Pugson, Chief Officer (Carriage & Wagon Construction & Maintenance), Railway Executive; J. Blair, Carriage & Wagon Engineer, L. M. Region; N. Thornley, Personal Clerk to Mr. Ivatt; A. E. Peters, Works Superintendent (Carriages & Wagons), Wolverton.

Mr. Arthur Makin has been elected to the Board of Marshall Sons & Co. Ltd.; he has been associated with the company since 1934.

We regret to record the death on June 15 of Colonel J. F. Fawcett, V.D., M.Inst.T., Deputy Agent, Madras & Southern Mahratta Railway, from 1919 to 1930.

Mr. K. W. C. Grand, Chief Regional Officer, Western Region, British Railways, was the principal guest and speaker at the monthly dinner of the Transportation Club held at 44 Wilton Crescent, London, S.W.1, on Thursday, June 14.

Lord Hurcomb, Chairman of the British Transport Commission, has been elected President of the Society for the Promotion of Nature Reserves.

Mr. D. Frew, Assistant to Accountant, London Midland Region, has been appointed Assistant Accountant, Scottish Region.

The Eastern Region has announced the appointment of Mr. S. Russell, Technical Assistant to the Chief Mechanical Engineer, London Midland Region, Derby, as Carriage & Wagon Works Manager, Stratford, Eastern Region.

We regret to record the death on June 13, at the age of 66, of Mr. J. B. Chifley, P.C., Prime Minister of Australia from 1945 to 1949 and since then Leader of the Opposition. Before entering Parliament in 1928, he had served on the New South Wales Government Railways as an engine-driver and had been a prominent figure in the Railway Locomotive Engine-Drivers' Union.

We regret to record the death on June 16, at the age of 64, of Mr. R. E. FitzGerald, who retired as London Agent, Rhodesia Railways, last year. He joined the staff of the British South Africa Company in 1904, and after a short training in other sections was transferred to the railway department. He entered the Artist Rifles in 1914, and subsequently was commissioned in the Royal Army Ordnance Corps. He served in France and Russia and rose to the rank of Lt.-Colonel, before returning to the railways in 1919. Mr. FitzGerald held the post of Assistant Secretary, Mashonaland Railway Co. Ltd., from 1913 to 1924, and was Secretary from 1925 to 1937. He was Secretary, Rhodesia Railways Limited, from 1925 to 1930, and between 1931 and 1948 he held the combined post of London Manager and Secretary; Mr. FitzGerald was appointed a Director in 1938. Subsequently the newly nationalised Rhodesia Railways appointed him as London Agent. In connection with his other administrative posts, Mr. FitzGerald held directorships and secretaryships of the Beira Port Companies, and the Shabani Railway Company.

British Railways New Goods Depot at Liverpool

Work is to begin in the autumn on the building of a modern depot at Huskisson, Liverpool, for dealing with received and forwarded sundries traffic. The facilities will include a new shed measuring 450 ft. × 135 ft. with electrically operated slat conveyor and gantry crane for received sundries traffic. There will also be new offices and up-to-date amenities for the staff. This new depot in the London Midland Region will be one of the most modern in the country and will cost some £200,000.

Briefly the method of handling the traffic will be that the packages will be taken from the wagons and placed on the electric conveyor. Packages for town handling will be taken off the conveyor at the appropriate points and loaded on to road delivery vehicles. Traffic requiring to pass through the warehouse or to "wait order" will be taken off the conveyor at the deck provided for this purpose adjoining the shipping warehouse.

Sundries traffic requiring craning will be transferred direct by a 30-cwt. electric overhead crane from wagon to road vehicle in the case of town delivery traffic and to "wait order" deck in the case of shipping sundries. Cranage inside the shipping sundries warehouse will be provided by a 25-cwt. electric mobile crane and a ramp will be provided to enable it to be worked into and out of the warehouse. Forwarded sundries will be discharged direct to wagon from road vehicle.

German Summer Passenger Services

New international and interurban services have been introduced and existing ones much accelerated in the summer timetable of the (Western) German Federal Railways. The new international services include the revived "Rheingold Express" (referred to in our May 25 issue) the "Holland-Italian Express" *via* the Rhine valley and the Gotthard, connecting with the Harwich-Hook day boat, and the "Tauern Express" connecting with both the Harwich-Hook and Dover-Ostend day boats; the Hook and Ostend portions of the last-named unite at Cologne, and the main train runs *via* Mainz, Heidelberg, Stuttgart, Munich, Salzburg, and the Tauern Tunnel to Zagreb and Belgrade, with through coaches for Lindau and the Arlberg line (detached at Ulm) and for the Brenner and Merano (detached at Munich).

The "Nord Express" has been much accelerated, with the Paris-Copenhagen journey reduced to 24½ hr.; it is a heavy train, smartly timed in Germany, *e.g.* Osnabrück to Bremen, 76 miles in 89 min. though other steam-hauled trains have harder schedules over this section, such as 82 min. for the Cologne-Hamburg lightweight express. Through sleeping cars between Paris and Oslo will run in the "Nord Express" during the high season. The "Scandinavia-Italy Express," between Stockholm and Rome *via* Copenhagen, Hamburg, Hanover, Frankfort, Basle, and the Gotthard, with a portion for Vienna *via* Passau, detached at Bebra, has been accelerated to give a journey time of some 50 hr. between Rome and Stockholm, 1,920 miles.

Fast internal services worked by diesel railcars or lightweight steam trains have been introduced extensively in Western Germany. The railcars between Dortmund, Cologne and Basle, and Basle, Munich and Regensburg, or between Munich, Frankfort and Hamburg average 51-56 m.p.h. start-to-stop on most sections, with a speed limit of 75 m.p.h. The Hamburg-Munich railcar Ft. 56 covers the whole distance of 504 miles in 8 hr. 59 min. with five stops. Lightweight steam trains average 45-50 m.p.h. stop-to-stop. One of the fastest is F.41, Frankfort-Hanover-Hamburg, which is allowed 6 hr. 35 min. for the 332 miles, with three stops.

Through services between Western and Eastern Germany are few, and virtually confined to those to and from Berlin. A pair of railcars daily covers the distance of 178 miles between Hamburg Hauptbahnhof and Berlin Zoo in 3 hr. 32 min. east - and 3 hr. 31 min. westbound, including frontier halts totalling 28 and 35 min. respectively.

Italian Railways Summer Train Services

The chief feature of the Italian State Railways summer passenger services is the general reduction in journey times between important centres without much acceleration in the shorter runs. Thus the 382 miles from Rome to Milan *via* Florence, the Apennine Tunnel, and Bologna are covered in 7 hr. 20 min. in either direction by electrically-hauled *rapido*, and in 6 hr. 40 min. north - and 6 hr. 35 min. southbound by *elettrotreno* (high-speed multiple-unit set); the fastest time between Rome and Turin (electrified) *via* Pisa and Genoa, 414 miles, is 8 hr. 45 min. each way, by *rapido*; from Rome to Villa San Giovanni, the mainland terminus of the train ferry to Messina, a day *rapido* covers the 420 miles (all electrified) in 9 hr. 35 min. including slow running over the Naples underground section and mainly single line south of Naples; this train gives a day service from Rome to Palermo, some 570 miles, in slightly over 14½ hr., including the Straits of Messina crossing and a railcar over the steam-worked line, mainly single, in Sicily.

Fast electric runs include Rome to Leghorn, 196 miles, in 206 min. ("Rome Express"); Rome to Florence, 196 miles, in 204 min. (*elettrotreno*); Milan to Bologna, 136 miles, in 113 min. (*elettrotreno*); and Rome to Naples Mergellina, 131 miles *via* the *Direttissima* line, in 131 min. (*elettrotreno*). Steam-worked runs include Milan to Venice, 166 miles, in 200 min. with four stops by a somewhat lightly loaded *rapido*, and in 233 min. with six stops by the heavily loaded "Simplon-Orient Express."

New Motorship for Isle of Wight Service

(*Concluded from page* 702)

enabling the service to be maintained regularly in conditions of bad visibility. Lighting and power for the electrical auxiliary machinery is provided by three Ruston & Hornsby diesel engines, each of 60 kW. output. Steam for domestic use and heating is supplied by a Cochran boiler fitted with Clyde automatic oil-burning unit. Thermotank ventilation is fitted throughout the vessel and a public address system is installed. Considerable sound insulation has been carried out in the engine room by Paxmarine insulation, provided and fitted by Newalls Insulation Co. Ltd.

Institute of Transport Annual Congress

Discussion of Papers and visits to transport installations during Summer Meeting

The annual congress of the Institute of Transport was held last week at Torquay, Devonshire. Mr. J. S. Wills, President, was in the chair at the formal opening on June 13, when the Mayor of Torquay, Alderman E. G. Ely, welcomed the delegates. In the course of his speech the Mayor referred to the very cordial relations which had existed for so long in the Torquay district with the Devon General Omnibus & Touring Co. Ltd. and the other transport organisations which served the area.

The President, in formally opening the Congress, spoke of the value of meetings of this kind, not merely because of the papers that would be read, or the places and works of transport interest which would be visited by the delegates, but more particularly, perhaps, because of the opportunity afforded for members of the Institute representing all branches of transport to meet, to get to know one another better, and to discuss their varying problems and their points of view. It would give him an opportunity of meeting people to whom previously he had been but a signature on a letter—he thought it a good thing to dissipate any impression that the Managing Director of the British Electric Traction Co. Ltd. was not in fact just a signature—the inky centre of a private enterprise octopus.

During the Congress two formal papers were delivered, the first by Sir William Wood, a past President of the Institute and a Member of the British Transport Commission, on "Transport Efficiency and Levels of Charges" and the second by Mr. David Renton, M.P., on "Parliamentary Control of Nationalised Transport." Because of his parliamentary duties Mr. Renton was unable to present his paper in person and it was read for him by Sir Joseph Nall, a past President of the Institute and a former Member of Parliament. Both these papers were the subject of editorial comment in our last week's issue.

Sir William Wood, in presenting his paper, which had been circulated, gave a summary of its contents and added some comments rebutting current criticisms of the railways. He pointed out that it would take about £120 million to make good current deficiencies in railway maintenance, and that under the present system of capital control this was not possible. The difficulties of the railways were almost wholly physical, but the labour problem was also very acute. He could see no foundations for any suggestions of the taxpayer having to make up the deficit of the British Transport Commission, and he thought that such words as "insolvency" and "bankruptcy" were being carelessly used without any regard for their real meanings. "Insolvency" meant inability to pay debts and bankruptcy usually followed that stage. He also explained that the statistics he had used in his paper, dealing with miles per train-hour, did not constitute a measure of speed, but the time a passenger train was away from its depot, including standing time.

The railways at the present time were being subjected to a storm of abuse, much of it having a political origin. They were carrying a greater burden than at any time in their history except in one or two of the war years.

Discussion of Papers

After the President had thanked Sir William Wood for his paper, a detailed discussion of it ensued, and Sir William Wood answered a number of points by speakers as they were made. It was suggested that one of the criticisms of the railways arose from the relatively poor service at relatively high prices. It was accepted that there were many good reasons for these two factors, bearing in mind the figure of £120 million which Sir William Wood had given as being required to make good the railways' physical assets.

It was also suggested that it was not surprising that present criticisms should be linked with the nationalisation of transport because the public was interested only in results, and it had had a good many instances now of nationalisation of an industry being followed by higher prices for a poorer article. If the government insisted that the equipment which the railways needed for the provision of adequate and essential services could not be made available then it would be necessary to take steps to induce the government to change its methods of planning.

Other points which were made by speakers were the possibility of making greater use of certain canals and the introduction of a scale of charges which would encourage large traders to lay down future installations at their works with a view to the use of high-capacity wagons.

Sir Joseph Nall read Mr. David Renton's paper and afterwards gave some comments on it. He pointed to some of the difficulties of maintaining a close parliamentary control over a nationalised undertaking. He regretted that in the present House of Commons there were very few members with a knowledge of railway affairs such as had been available when a number of directors of the old railway boards had sat at Westminster.

In the discussion of the paper one speaker urged that the best course which could be followed would be for the people in charge of transport to be permitted to get on with their jobs without the constant need for having to keep in mind the possibility of parliamentary enquiry.

On June 13, members of the Congress visited the locomotive works of British Railways (Western Region) at Newton Abbot and also the works of the Devon General Omnibus & Touring Co. Ltd. at Torquay. The Newton Abbot Works is situated on the route of the old South Devon Railway, which ran from Exeter to Plymouth and the construction of which was authorised in 1844. The oldest existing portions of the locomotive repair shop and motive power depot were erected in 1863. The carriage repair depot was built in 1890, and these buildings remained substantially unchanged until 1929.

The locomotive works deals generally with light repairs to locomotives of all classes, the bulk of them arising from heavy tyre wear encountered on West of England branch lines. There are thirty pits in the locomotive workshop and two overhead gantry cranes. The most interesting feature of the works is the drive for the machinery, which is a steam engine constructed from portions of an old broad-gauge locomotive.

At the carriage and wagon repair shop

Sir William and Lady Wood being received by Mr. and Mrs. J. S. Wills

Mr. A. B. B. Valentine, President-Elect, and Mr. J. S. Wills, President of the Institute of Transport

light repairs are carried out to carriage and wagon stock, including a certain amount of re-trimming and re-polishing of interior fittings. The approximate number of repairs per annum is—carriages, 1,600 and wagons, 1,700.

The Devon General Works of Torquay has a capacity for 85 vehicles in the main garage which has a floor area of 39,600 sq. ft. Fuel storage is provided for 15,000 gallons. The company operates over a route mileage of 1,076 miles with a total fleet strength of 327 vehicles. The works at Torquay, besides being the garage of the Torquay area, is also the headquarters and central workshops of the company. It includes an engineering records office, a degreasing shop adjacent to the overhaul pit and equipped with I.C.I. trichlorethyline plant and streamline filter, a unit bench for the repair and overhaul of chassis components, and machine shop, blacksmith's shop, tinsmith's shop, electrician's shop and welding shop, as well as a fuel injection shop and an engine shop. There is also a well-equipped stores and a body shop for complete overhauls, routine maintenance and accident repairs. In the ticket machine section provision is made for repair and maintenance of these machines, and in the paint shop complete repaints of rolling stock take place every two years.

On June 14 a visit was paid to the works of the Western National Omnibus Co. Ltd. and of Plymouth City Transport at Plymouth, Mr. J. Paton Watson, City Engineer of Plymouth, spoke on the reconstruction of Plymouth and illustrated his talk with models. Millbay Docks, which dates from 1835, was also visited. It has a tidal inner basin of 13 acres designed and constructed by I. K. Brunel and a dry dock capable of receiving vessels of 10,000 tons deadweight. A visit was made by ocean tender into Plymouth Sound and the Hamoaze to view the Dockyard and the Ocean Terminal.

In the evening of June 13 the Mayor and Mayoress of Torquay held a reception for members of the Congress, and on the next evening the President and Mrs. Wills held a reception, which was attended, in addition to members of the Congress, by the Mayor of Torquay and Lord Mayor of Plymouth, the Mayor and Sheriff of Exeter and the Chairman of the Plymouth Transport Committee. On the morning of June 15 members visited the Exmouth Junction Works of British Railways (Southern Region), Exeter Cathedral and Guildhall, where the party was received by the Mayor of Exeter.

A full programme of visits to places of scenic or other interest was carried out during the Congress for ladies accompanying Members of the Institute. These included excursions by road to Haytor and Ashburton; an excursion on the River Dart; and a visit to Buckfast Abbey, and another excursion to Shaldon and to Teignmouth.

New Train Arrival Bureau at Euston

Opening by Mr. John Elliot of waiting hall and indicator screen to replace existing train arrival indicator

The Chairman of the Railway Executive, Mr. John Elliot, on June 18 formally opened the new train arrival bureau in the rear of Nos. 1-3 main-line arrival platforms, (at the junction of Drummond and Eversholt Streets) at Euston Station. This replaces the nearby train arrival indicator, with its waiting enclosure (" pen ") which is being removed with the adjacent wooden buildings. The bureau consists of a one-storey brick building embodying a waiting room seating 92 persons, in which is an inquiry counter and train indicator screen, and, in the rear, teleprinter office and gallery behind the screen for projectors and operators.

Indicator Screen

The indicator screen is divided into twelve panels, on which information about incoming trains is flashed by projectors. Facing the screen are rows of seats, but it is possible to see the panels through a long non-reflecting window without having to enter the building. The information covers all steam trains (*i.e.* all trains except the Watford suburban service) and will show their progress at Rugby and Watford Junction or Tring, and, as each one approaches Euston, the platform at which it will arrive. Particulars of trains are advised from Willesden Telegraph Office by teleprinter, supplemented as necessary by telephone from Euston Arrival Box.

The projectors serving the screens are equipped with a wide-angle, wide-aperture lens, with special heat-absorbing glass in the condensers, and were designed specially to the requirements of the Architect of the London Midland Region. The slides are Perspex-blackened, with lettering cut by engraving machine. Information displayed on the screen is supplemented by loud-speaker announcements immediately before arrival of the trains at the platforms, and in other special circumstances; announcements are diffused inside the waiting room and over the areas at the ends of the arrival platforms.

The screens are flanked on the left by an inquiry counter, and on the right by a large diagrammatic map of the L.M.R. Western Division main and connecting lines, with principal mileages from London. Display showcases for commercial advertisers are grouped against the walls. The building has a steel and concrete roof and canopy, and a concrete floor, the latter covered with heavy-gauge linoleum. Lighting is by fluorescent tubes. As regards heating and ventilation, in winter, hot cleaned air is forced into the room, and in summer, cold cleaned air; all vitiated air is extracted mechanically. In winter the heat from the projector bulbs is used to assist heating the incoming air.

Left: Mr. John Elliot speaking at the opening ceremony; on his right is Mr. J. W. Watkins. Right: Interior of waiting hall, showing inquiry counter, train indicator screen, diagrammatic map, and fluorescent lighting fixtures in ceiling; the teleprinter room is beyond the inquiry counter

but in summer this heat is extracted and discharged outside. The predominating colours in the interior are cream and blue, the former being used for walls and ceiling and the latter for seat upholstery and floor covering.

The exterior is finished in handmade sand-faced brick. There is a wide canopy over the entrance; centred above this is a maroon sign "Train Arrival Bureau" in white, and at the south-east corner of the building (at the street corner) is displayed the British Railways emblem, with directional indication in white cut-out letters below. In the external walls are embodied symmetrically disposed railway and commercial advertising poster sites, with tiled surrounds.

Principal Contractors

Principal contractors are as follow:—

General contractors ...	Mansfield & Neil Limited
Sub-contractors :	
Bricks	Henry J. Greenham (1929) Limited
Roof units	Universal Asbestos Manufacturing Co. Ltd.
Asphalt	General Asphalt Co. Ltd.
Heating, ventilation, and lighting	Matthew Hall & Co. Ltd.
Projectors and slides...	Ross Limited
Tiling	W. B. Simpson & Sons Ltd.
Floor	Semtex Limited
Non-reflecting window, showcases, shop-fitting, and map	William Mason & Sons Ltd.
Signs	Mead McLean & Co. Ltd.
Paints	Vulcan Products Limited

The work was carried out by the Civil Engineer's Department of the London Midland Region under the supervision of Mr. J. M. Harrison, A.R.I.B.A., Architect.

Official Opening

Mr. J. W. Watkins, Chief Regional Officer, London Midland Region, introducing Mr. John Elliot at the opening ceremony, referred to the Governmental restriction on capital expenditure on British Railways; despite this, however, the L.M.R. had obtained authority for expenditure of £300,000 on resignalling, improved track layout, and platform lengthening at Euston (described in our March 16 issue), which would result *inter alia* in greater punctuality in train arrivals. The new arrival bureau, he added, had been initiated by Mr. John Elliot when Chief Regional Officer of the L.M.R.

Mr. John Elliot, declaring the bureau open, said that Sir Eustace Missenden, his predecessor as Chairman of the Railway Executive, had suggested a new arrival indicator as part of the improvement scheme for Euston. Any such scheme involving brightening-up of the station, added Mr. Elliot, needed great care, in the setting of Euston, with its existing *décor* and traditions. He went on to praise the work of Mr. J. M. Harrison, Architect of the L.M.R., and expressed his confidence that the improvements at Euston would result in greater punctuality.

Punctuality on British Railways

The L.M.S.R. under its Presidents, Lord Stamp and Sir William Wood, he said, had a fine punctuality record. As it was, however, British Railways were handicapped in this respect, not only through lack of track renewals and in heavy traffic during the war years, and by poor-quality locomotive coal at present, but also by the high traffic density and the limit on capital expenditure. He believed that given time, British Railways would surmount their present difficulties, just as the Southern Railway under Sir Herbert Walker (who had himself come to the L.S.W.R. from Euston) had emerged successful from its earlier difficulties years after amalgamation. Peace, however, and freedom from interference and disparagement, and time in which to complete train improvement schemes, were necessary.

Those present at the opening included: *British Transport Commission:* Sir William Wood and Mr. F. A. Pope, Members; Mr. J. H. Brebner, Chief Public Relations & Publicity Officer.

Railway Executive: Messrs. W. P. Allen, V. M. Barrington-Ward, David Blee, R. A. Riddles, J. C. L. Train, and General Sir Daril G. Watson, Members; Messrs. J. L. Harrington and A. J. Pearson, Chief Officers (Administration), J. Ness, Chief Officer (New Works), V. Radford, Chief Financial Officer, and S. E. Parkhouse, Chief Officer (Operating).

London Midland Region: Messrs. E. S. Hunt, Assistant Chief Regional Officer, A. E. Hammett, Commercial Superintendent, George Dow, Public Relations & Publicity Officer, G. J. Harris, Accountant, S. G. Hearn, Operating Superintendent, F. W. Abraham, Motive Power Superintendent, J. Taylor Thompson, Civil Engineer, J. M. Harrison, Architect, and H. S. Turrell, Stationmaster, Euston.

Staff & Labour Matters

Engineers' Wage Claim

The Amalgamated Engineering Union, the biggest of the 36 unions represented by the C.S.E.U., is considering at its annual conference which opened this week proposals for an all-round wage increase. Twenty-three of the A.E.U. divisions, out of 26 in all, representing 800,000 engineering workers, have tabled resolutions for a new wage claim ranging from £1 to £2 a week.

Last November the engineers were awarded increases of 11s. a week for skilled, and 8s. for unskilled workers. It is submitted by branches all over the country that these increases are inadequate and have been more than wiped out by the rise in the cost of living in recent months.

Questions in Parliament

Deferment of Railwaymen

Sir Waldron Smithers (Orpington—C.) on June 13 asked the Minister of Labour what reply he had made to the formal request made by the B.T.C. to exempt their employees from being called up.

Mr. Alfred Robens stated in a written answer: The request was not that employees of the Commission should be exempted from call-up, but that the calling up of individual men, among those employed by the Railway Executive in certain grades and districts, should be deferred for twelve months. I have replied that I am unable to grant this request.

Direct-Drive Gas Locomotive

Mr. Donald Wade (West Huddersfield—Lib.) on May 31 asked the Under Secretary of State for the Home Department, as representing the Lord President of the Council, why the Department of Scientific & Industrial Research had not facilitated the development of the direct-drive gas locomotive invention which its technical adviser recommended.

Mr. Geoffrey de Freitas, in a written answer, stated: The Department of Scientific & Industrial Research brought this invention to the notice of organisations more directly concerned with commercial development of inventions of that character. The Department did thereby facilitate development to the extent that was possible for it.

Contracts & Tenders

The Government of Pakistan has recently placed a contract in Japan for 25 "YD" class 2-8-2 locomotives.

The contract for the resignalling of Euston Station, London Midland Region, has been awarded to Westinghouse Brake & Signal Co. Ltd., which will be responsible for the supply and installation, with certain exceptions, of the whole apparatus. The apparatus will include:—

100 sets of electro-pneumatic facing point layouts, involving the installation of approximately 2½ miles of air main and branch piping.

110 a.c. condenser fed track circuits, covering a total of approximately seven miles of track.

31 field locations using 44 apparatus cases.

1,000 a.c. relays, excluding the track relays for various control functions.

Compressor plant, including two electrically-driven compressors and one diesel-driven compressor, with automatic starting and control gear, switchboards, steel relay racks, fuse racks and disconnection racks.

The 227-lever all-electric Westinghouse power frame to be installed was built some years ago and held by the L.M.S.R. as war emergency stock.

The London Midland Region will provide and fix 34 main colour-light signals and 36 ground light signals, the main run of cable, and a 60 kW. diesel alternator for emergency standby.

It was recently stated by the Board of Trade Special Register Information Service that the United Kingdom Senior Trade Commissioner in Pakistan has reported a call for tenders by the Government of Pakistan, Ministry of Communications (Railway Division) for the supply of 119 broad gauge (5 ft. 6 in.) dismantled, oil tank wagons of "TO" type. The wagons are to be completed with underframe, vacuum brake fittings, drawgear, buffing gear and painted, to P.R.S. specification and drawings referred to therein.

Copies of the tender documents and particular specifications can be obtained from the Office of the Director-General Railways, Railway Division, Ministry of Communications, on payment of Rs. 40 for each set. Copies of the conditions of contract A-5(a)-50 and general specifications R-6-49 may be obtained on payment from the Manager of Publications, Government of Pakistan, Karachi. Tenders must reach the Office of the Director, Mechanical Engineering & State Railway Division, Ministry of Communications, Government of Pakistan, Karachi, by 11 a.m. on July 25.

A report from Johannesburg states that the South African Railways have issued a call for tenders (No. C.2724) for the supply of electrical signalling equipment. The tender closes punctually at 9 a.m. on Thursday, July 12. Tenders must be enclosed in a sealed envelope, which must have inscribed on the outside: "Tender No. 2724 for electrical signalling material." If posted, the envelope must be addressed to the Chairman of the Tender Board, P.O. Box 7784, Johannesburg, and must be despatched in time for sorting by the Post Office into P.O. Box 7784 before the closing time. Other arrangements have been made for deliveries made by hand and for tenders received by telegraph.

A copy of the tender documents is available for inspection by representatives of United Kingdom manufacturers at the Commercial Relations & Exports Department, Board of Trade, London, S.W.1.

Ministry of Transport Accident Report

Northolt Junction, Western Region, British Railways: August 28, 1950

Mr. J. L. M. Moore, Railway Employment Inspector, Ministry of Transport, inquired into the failure of an engine which occurred shortly after 1.20 p.m. on August 28, 1950, near Northolt Junction. As the 10.25 a.m. goods train of 37 vehicles, Woodford to Neasden, was approaching, the little-end of the right connecting rod became disconnected from the cross-head. The rod bent without breaking and locked the wheels almost instantly, preventing further serious damage. Damage to the boiler also was minimised by the robust cast-steel cross-stay between the main frames, but its outer shell was punctured near the foundation ring, and the inner copper firebox bulged inwards. The boiler emptied itself on the track, compelling the driver and fireman to leave the footplate, and they became enveloped in steam and water, but escaped serious injury; they were able to return home after receiving first aid. The train travelled for nearly a mile after the failure and would have gone farther had not the driver heard the wheels sliding and returned to the footplate to apply the tender hand brake.

The signalman at Northolt West realised that the engine had failed, seeing it enveloped in clouds of steam and later noticing that the coupled wheels were not revolving. The guard had no need to protect his train, which was within signals, and went forward to meet the driver, whom he found in a distressed condition. He accompanied him to the box and explained the position. Notification was sent to Neasden and the shed foreman there arrived on a light engine at 2.40. He saw at once that acetylene cutters would be needed to render the engine movable and the breakdown van was ordered. The engine was taken away with its train at 6.25. First aid was rendered to the two men as soon as possible.

Cause of the Failure

The engine was one of the J.39 0-6-0 class and had run 42,000 miles since the last general repair at Gorton in 1948, receiving light repairs at Stratford in 1949. The connecting rods of these engines are dismantled every 10,000 to 12,000 miles. This was last carried out at Norwich on March 7, 1950, since when the engine had run about 10,000 miles in the course of which the right-hand little-end had appeared once only on the repair cards, when the split pin of the gudgeon pin was found broken on July 22 and was renewed. There were no reports against the little-end on the left-hand or the cross-head during that period.

The failure was the result of the castle nut coming off the right gudgeon pin, but neither it, nor the split pin normally securing it, were found. This freed the gudgeon pin to move horizontally towards the main frame until the other end of it became foul of the right leading horn block. This caused the solid little-end eye of the connecting rod to break away vertically through the oil cup and hole. Steam in the cylinder forced the piston forward, fracturing the front cover, and the connecting rod was carried back by the crank, and striking the driving wheel brake stretcher bent itself almost double; its final shape was remarkable, the big-end still being correctly attached to the crank-axle, while the little-end was resting in the ash-pan. Other damage was remarkably small.

On the day before, the engine worked a ballast train and the driver reported at the shed some slackness between engine and tender, and slight defects in the injectors and regulator. Another driver and fireman put the engine away. The former found nothing to add to the other man's report. He was looking out primarily for hot bearings, but accepted responsibility for finding other defects. He could not recall how he dealt with the little-ends and gudgeon pins, but his remark that these bearings seldom gave trouble through overheating may be significant and suggest possibly that he did not give them the same attention as the others.

An hour was spent by another driver and fireman in preparing the engine between 1.0 and 2.0 a.m., but his responsibility was mainly to oil and replenish the engine generally, and, although he would be expected to watch for defects at the same time, would not have the same opportunity as a driver putting the engine away. He had no occasion to go beneath it as he could reach everything from the framing above. The nuts on the gudgeon pins could, however, only be seen with the pistons in certain positions. It would be difficult in any case to determine the condition of the split pins, especially at night.

The fitter's weekly routine examination was carried out barely an hour before the engine left the shed. It was over a pit on a straight level track in the shed, and the examining fitter went beneath it at about 9.0 a.m., with his acetylene lamp and hammer, the latter for the express purpose of tapping the larger nuts to make sure they were tight. He stated that he had ample time for his examination and paid particular attention to the fastenings of the gudgeon pins, knowing the design of the cross-head to be not entirely satisfactory and the nuts liable to work loose. He was fully satisfied that they were in order and examined them on this occasion. Nuts and split pins could be seen from the pit and felt or otherwise tested. Had either of them shown the slightest looseness or the split pins been in any way defective he would not have passed the engine for traffic.

The engine travelled 61 miles before the failure occurred without warning. Except for slackness between engine and tender, not yet remedied, the driver regarded it as being in very fair condition. After opening the regulator at Northolt Junction distant signal he heard two distant bangs from the front end, followed by the events described.

Inspector's Conclusions

There was sufficient thread left on the gudgeon pin to enable Mr. Moore to see with little doubt that the nut had been working on it for some time before it sheared the split pin and came off. The broken split pin reported on July 22 was probably due to the same cause. It is not suggested that the pin was missing when the fitter examined the right-hand cross-head on August 28, but the nut must have been a loose fit on the gudgeon pin, and there may have been appreciable wear on the split pin. His failure to find these defects indicates that he made a very indifferent examination, for which there was no excuse. If he considered the method of securing the gudgeon pin unreliable, as he himself suggested, he should have been all the more particular. He was therefore careless and must be held primarily responsible for this accident. He has had 30 years' experience as running shed fitter and bears a good reputation as such.

The fitter's routine examination does not take place daily, although loosely so referred to, but varies with the engine and its class of work. It is of the utmost importance that this examination be recognised as an additional safeguard, in no way detracting from the responsibility of observing defects still resting on the driver who puts an engine away and, in lesser degree, on the man who prepares it. The driver who did this must also bear a large measure of responsibility; his examination was obviously not as thorough as it should have been. The failure of the driver involved in the accident to notice anything amiss was excusable. The defect must have been developing for some time, and the fact that it was not discovered until it caused a serious accident does not reflect credit on other fitters and drivers who made earlier examinations, and it is to be hoped that the case will serve as a warning to carry out examinations carefully and conscientiously.

Recommendation

The fitter's unfavourable impression concerning this type of cross-head is apparently not without foundation. Several modifications have been made in the design, dating back to 1938. Originally the gudgeon pins were inserted from the inside with the nuts close against the main frames. In 1941 they were reversed to offer better facilities for examination and maintenance. A year later the pin itself was modified. In 1947 an entirely new design was produced and, being satisfactory, is being fitted to these engines during renewals. This case emphasises the weakness of this cross-head design and Mr. Moore recommends that the remainder be replaced by the later design at the earliest opportunity.

ARGENTINE GOVERNMENT SELLING RAILWAY PROPERTY.—The Argentine Government has decided to dispose of property to the value of some 300,000,000 pesos. Much of it is nationalised railway property. Proceeds from these sales will go largely towards reducing the indebtedness of State departments with the Foreign Trade Promotion Institute and, in turn, the Institute's indebtedness with the national banks.

HOLIDAY RUNABOUT TICKETS.—We are asked to make it clear that the editorial comment appended to the letter entitled "Holiday Runabout Tickets" in our June 1 issue, is incorrect in so far as it refers to the issue of these tickets in the Southern Region. Because of the volume of regular and holiday traffic in this Region it is considered desirable to provide for runabout tickets to be available only from a Sunday to the following Saturday, or Monday to Friday (for tickets issued in the Isle of Wight) and not for them to be available for travel starting any day of the week. In North Wales, the Lake District, and Scotland, also, there are some divergencies from the standard seven-day availability to meet local conditions.

Notes and News

Engineer Required for Malayan Railway.—Applications are invited for the post of engineer, way and works, between 25 and 36 years of age, required for the Malayan Railway. See Official Notices on page 711.

Assistant Civil Engineer Required.—A vacancy has occurred in the East African Railways & Harbours Administration for an assistant civil engineer. Candidates must be over 25 years of age. See Official Notices on page 711.

British Railways Coal and Steel Carryings.—During the weekend ended June 18, British Railways cleared 226,300 tons of coal from deep-mined pits and open-cast sites; this makes a total of 3,113,260 tons for the week. The latest figures for iron and steel show that 204,956 tons were conveyed during the week ended June 9 from the principal steelworks.

Midland Railway Company of Western Australia Limited.—The directors of the Midland Railway Company of Western Australia Limited intend to issue £45,000 of the company's 4½ per cent. first mortgage debenture stock to meet proposed capital expenditure. The stock is being issued at the price of 90 per cent. and is offered to holders of the company's first mortgage debenture stock and second mortgage cumulative income debenture stock.

Economies in the Scottish Region: Mr. John Elliot on Results of Nationalisation.—In the course of his recent Scottish tour, referred to in our last week's issue, Mr. John Elliot, Chairman of the Railway Executive, stated at a press conference at Glasgow that economies in goods traffic operation in the Scottish Region amounted to £200,000 as the result of co-ordination of all Scottish services since nationalisation. Over all the services in Scotland the annual saving was £12,000,000. This saving was due to economy in the operation of many local services, but Mr. Elliot stressed that any such economy could only be brought about by cancellation of many services. They did not want to cause hardship, but they could not afford to disregard their responsibility for any loss. They had come out of the railway age, and were into the transport age, and it was their job to give the public the kind of transport it wanted, and for which it was prepared to pay. Where better alternative services were offered, it was not intended to compete with bus services, and what the railway could offer must be considered as a part of the general transport facilities of the country.

Jugoslav Services Restored.—International expresses are running normally again after a five-day diversion due to heavy flooding which damaged embankments on the Zagreb-Belgrade line. Regular services on the Zagreb-Belgrade line and on local lines in Croatia have also been restored.

Cuban Railway Nationalisation Again Demanded.—President Socarras, of Cuba, addressing several thousand workers of the United of Havana Railways on June 15, said he would send a message to Congress requesting legislation for the nationalisation of the railways. The demonstration was organised in support of the United Railways' Workers demand for nationalisation. This demand was supported by the Cuban Workers' Confederation. No indication was given as to when the message would be forwarded to Congress, though it implied there would be no delay.

G.N.R.(I.) Shareholders' Protection Association.—At the recent annual meeting in Dublin of the Shareholders' Protection Association of the Great Northern Railway (Ireland) the Chairman, Mr. F. Storey, remarked that the Governments would be taking over a valuable property and a railway in good working order with great possibilities. If the company was bankrupt one might understand why such a poor offer as £3,900,000 was made, but for a concern which the Milne Report stated was in such good condition and managed so efficiently, the price was insulting. Mr. Storey expressed the hope that the new Government in Ireland would agree to have the purchase price settled by arbitration. To maintain the standard of the company, more than £1,000,000 a year had been ploughed back from revenue in recent years, and the Stock Exchange values of the stocks on which the purchase price was based were therefore no indication of the true value of the property.

Mexican Central Railway Securities Co. Ltd.—The fifty-second annual general meeting of the company will be held at the offices of Glyn Mills & Co. Ltd., 67, Lombard Street, E.C.3, at 3 p.m. on July 10, to receive the directors' report and the statement of account for the year ended January 31, 1951.

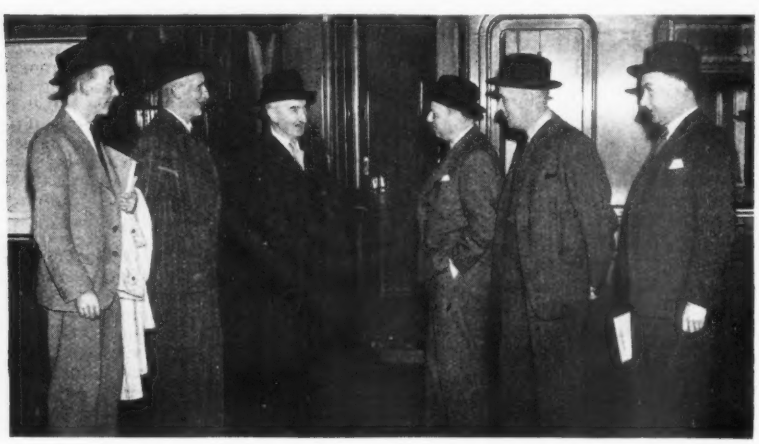
C.I.E. Officers Inspect Rosslare.—The directors of Coras Iompair Eireann, accompanied by engineers and heads of departments, arrived at Rosslare Harbour by special train from Dublin on June 11. They carried out an inspection of railway installations at the port, and saw the dredging plant now engaged in the harbour deepening scheme in operation.

19 Railway Group R.E.(S.R.): Annual Camp.—This year 19 Railway Group R.E. (S.R.) was the first to attend camp at Longmoor, and went there in two parts, the first, comprising the Operating Squadrons, from May 19 to June 2, and the second, comprising the Civil Engineering and Telegraph Squadrons, from June 2 to 16. In each case military training was carried out during the first week, and technical training—including a full-scale exercise on the Longmoor Military Railway—during the second week. Several hundred "Z" reservists were called up with the units to bring them up to strength.

Norwegian Travel Film.—A film entitled "Norwegian Holiday," which has recently been produced by Faro Films Limited, is the result of an attempt to present this type of subject in a new form. Instead of showing a foreign country as a series of views linked by an accompanying commentary, it has been decided to deal with an entertaining story and show the country as a natural background. Throughout the film the photography is of a high standard and the story which forms the subject matter, is sufficiently simple to avoid too great concentration on its detail with any resultant loss of attention to the scenic and other tourist attractions of Norway. The film will be distributed throughout the United Kingdom by British Lion Film Corporation Limited.

Withdrawal of Train Services: Scottish Region.—As from July 2 the passenger train service will be withdrawn from the Alyth branch of the Scottish Region. Stations on this branch are Meigle, Jordanstone, and Alyth. Passengers for points previously served by stations on the Alyth branch will be booked to Alyth Junction Station from which point a bus service operates. Passenger train parcels and miscellaneous traffic for Alyth and Meigle will be carried by rail to and from Alyth Junction and by freight train or road motor to connect with the passenger train services. Freight train traffic will continue to be dealt with at Alyth and Meigle, and Jordanstone will become a public siding for freight traffic in full truck loads.

Diesel-Driven Buffer Tractor.—A demonstration was held at Boston Docks, Lincoln, on June 12, during which a diesel-driven, rubber tyre buffer tractor designed by the Chaseside Engineering Co. Ltd. was used for wagon shunting. During the demonstration a train of wagons consisting of approximately 180 tons gross weight was shunted to a layby from the dockside cranes from a standing start. The machine



Mr. John Elliot, Chairman, with Members of the Railway Executive and Officers of the Scottish Region, at Glasgow. From left to right are Messrs. David Blee and J. C. L. Train, Members, Railway Executive; T. F. Cameron, Chief Regional Officer, Scottish Region; John Elliot; V. M. Barrington-Ward, Member, Railway Executive; and T. H. Moffat, Deputy Chief Regional Officer, Scottish Region (see paragraph above)

OFFICIAL NOTICES

His Majesty's Colonial Service

EAST AFRICAN RAILWAYS AND HARBOURS

A VACANCY has occurred in the East African Railways and Harbours Administration for an Assistant (Civil) Engineer. The duties consist of construction and maintenance of railway and port buildings, harbour works, etc., open line maintenance and improvement, surveying and construction of new lines and harbours. Appointment will be on two years' probation for permanent pensionable employment in the scale £650 to £1,040, point of entry being determined by War Service and experience. Free furnished quarters are provided and free passages for the officer, and, if married, for his wife, on appointment and on leave. Candidates must be over 25 and preference will be given to unmarried men for first appointment; they must have passed, or possess exemption from, Sections "A" and "B" of the A.M.I.C.E. examinations and they should preferably have had some railway experience, although candidates who have had good construction experience in other engineering projects may be considered. For a form of application write, giving particulars of age, qualifications and experience, to the DIRECTOR OF RECRUITMENT (COLONIAL SERVICE), COLONIAL OFFICE, Sanctuary Buildings, Great Smith Street, London, S.W.1. Please mention this paper and quote No. 27333/2.

JUNIOR Traffic Officials with railway traffic apprenticeship experience. Age about 25, single, required for service on railways in Peru and Bolivia. Apply to the Secretary of THE PERUVIAN CORPORATION LIMITED, 144, Leadenhall Street, London, E.C.3.

PERUVIAN CORPORATION LIMITED.—Required for British-owned Railways in South America, Accountants aged 25-30. Knowledge of railway accountancy and of Spanish advantageous; experience of staff management an advantage; three years' contract, renewable; liberal leave, passage paid. Salary according to experience.—Apply to the Secretary, PERUVIAN CORPORATION LIMITED, 144, Leadenhall Street, London, E.C.3.

RAILWAY SIGNALLING AND COMMUNICATIONS INSTALLATION AND MAINTENANCE. A practical guide, especially intended to help Signal Inspectors, Installers, Fitters, Linesmen, Draughtsmen, and all concerned with installing and maintaining Signal, Telegraph, and Telephone Equipment. 416 pp. Many illustrations. Cloth. 8*s.* By post 8*s.* 6*d.* *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

His Majesty's Colonial Service

MALAYA

A VACANCY has occurred for an Engineer, Way and Works, in the Malayan Railways. He will be in charge of a railway district of about 150 miles and will be responsible for the maintenance of the permanent way and buildings and for supervision of Special Service works within the district. The post is pensionable and appointment will be on probation in the first instance. The salary scale is $440 to $1,000 per month, point of entry being determined by the candidate's War Service and professional experience; expatriation pay, which is pensionable, $90 to $180 per month; cost-of-living allowance of 60 per cent. of basic salary, subject to certain maxima. For purposes of exchange with sterling, one dollar = 2*s.* 4*d.* Candidates should be between 25 and 36. They should be Corporate Members of the Institution of Civil Engineers or hold an equivalent qualification, and should have had experience of civil engineering works on a large railway. Experience of modern methods of permanent way maintenance with flat-bottomed rails would be an advantage. First class passages will be provided for the officer, his wife, and up to 3 children under 10; home leave on full pay will be granted at the rate of four days for each month's service after a tour of 3-4 years. Furnished quarters are provided at rents varying between $17.50 and $66 per month, according to the class of quarters. Malayan income tax is payable at low rates. For a form of application write, giving brief particulars of age, qualifications and experience, to the DIRECTOR OF RECRUITMENT (COLONIAL SERVICE), COLONIAL OFFICE, Sanctuary Buildings, Great Smith Street, London, S.W.1. Please mention this paper and quote No. 27333/26.

THE PERUVIAN CORPORATION LIMITED.—Assistant to Chief of Traction, Peruvian Railways: age 26/35. Qualifications: Apprenticeship with steam locomotive builders or main-line railway workshops, main experience with a locomotive running department. Knowledge of diesel power an asset. Higher National Certificate for Mechanical Engineering or graduate of Institute of Mechanical Engineers. A knowledge of Spanish an advantage. Apply to the Secretary of the PERUVIAN CORPORATION LIMITED, 144, Leadenhall Street, London, E.C.3.

INTERNATIONAL RAILWAY ASSOCIATIONS. Notes on the work of the various associations concerned with International traffic, principally on the European Continent. 2*s.* By post 2*s.* 2*d.* *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

Sudan Government

THE Sudan Railways require a District Locomotive Superintendent, aged 25 to 35, for service in the Sudan. The duties consist of the control and administration of Locomotive Running Depots, including maintenance of locomotives and rolling stock and general mechanical engineering duties. Candidates must be fully qualified and locomotive engineers both in theory and in practice. They must have graduated in Mechanical Engineering from a University and/or must be corporate members of the Institution of Mechanical Engineers, must have served a full apprenticeship or pupilage on a railway or with a firm of locomotive builders of repute, and must have filled a position of responsibility in locomotive engineering for not less than one year. Appointment will be either on long term contract for 12 years on a salary scale £E.617 to £E.1,055, with special post-service gratuity of £E.4,000, or on provident fund contract at higher rates of pay and different post-service benefits. Cost-of-living allowance varying between £E.142 and £E.352 per annum according to the number of dependants is at present payable, and, subject to certain limitations, an outfit allowance of £E.60 is payable on appointment. There is at present no income tax in the Sudan. Free passage on appointment. Further particulars and application form may be obtained on written application to: SUDAN AGENT IN LONDON, Wellington House, Buckingham Gate, London, S.W.1. Please mark envelopes "District Loco. Supt.—4/35."

WE buy used or unserviceable Steel Files at good prices, in lots of 2 cwts. or more.—THOS. W. WARD LIMITED, T.S. Dept., Albion Works, Sheffield.

RAILWAY MAINTENANCE PROBLEMS. By H. A. Hull (late District Engineer, L.M.S.R.). Valuable information. With much sound advice upon the upkeep of permanent way. Cloth, 8½ in. by 5½ in., 82 pp. Diagrams. 5*s.* By post 5*s.* 3*d.* *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

GLOSSARY OF WOOD. A technical dictionary for all associated with timber and its uses. Ten thousand terms about timber—the common and the little known, the old and the new. Ten thousand definitions covering the entire field of timber and its uses—growth, marketing, utilisation. The commercial timbers, their qualities and uses, tools and woodworking equipment, are all here explained simply, concisely and accurately. Illustrated by many clear line drawings. Price 21*s.* net. By post 21*s.* 9*d.* Tothill Press Limited, 33, Tothill Street, London, S.W.1.

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also demonstrated its towing ability, crossing rail tracks, placing of individual wagons on turntables, and turning them. Among those present were: Mr. J. A. Lacey, representing the Chief Docks Manager, Docks & Inland Waterways Executive, Hull, and the following officers of Eastern Region of British Railways: Messrs. C. Hartman, District Operating Superintendent, Lincoln; H. W. Graham, District Commercial Superintendent, Lincoln; and E. S. Gellately, Assistant District Commercial Superintendent, Lincoln.

Pakistan Railway Accident.—It is reported that eleven passengers were killed and 19 injured in a collision between a special wheat train and a Quetta-Lahore passenger train at Ghotki Station, 260 miles north-east of Karachi.

Sunderland-Hylton Train Services Increased.—Owing to the large number of houses now being built in the Hylton neighbourhood there has been an increased demand for transport between that district and the centre of Sunderland. In consequence, as from June 18, the North Eastern Region passenger train service has been considerably augmented. The 13 weekday trains from Hylton to Sunderland are increased to 23 and the 12 weekday trains from Sunderland to Hylton increased to 22. Sunday trains remain as before.

Ferry Vessels for Isle of Skye Service.—The first of the two British Railways vessels for improving the ferry service between Kyle of Lochalsh and Kyleakin has been placed in service. The new ferry is named *Loch Alsh*, and is primarily intended for the transport of vehicular traffic. It is equipped with a turntable, with space for two motorcars or one lorry, and when engaged on vehicular work the vessel will also be certified to carry passengers. When employed exclusively on passenger ferrying duties she will convey approximately 100 on each trip. The second vessel ordered from Wm. Denny & Bros. Ltd. for this service will be available for the peak summer traffic.

Restrictions on Use of Nickel.—Because of the increasing use of nickel in the defence programme, the Board of Trade and the Ministry of Supply are banning its use in the manufacture of a range of articles from today. The list includes in addition to domestic and electrical equipment, items used in making agricultural goods, cycles, motor cycles, and motor vehicles, building materials, catering, laundry and radio equipment, hospital furniture and fittings, railway carriage fittings, and some ship and boat fittings. The main nickel alloys involved are nickel silver, cupro nickel and Monel metal. The nickel plating of certain articles or components is also prohibited, but this provision does not come into force until August 22. The orders are on sale at H.M. Stationery Office.

R.S.A. Annual Report, 1950-51.—The annual report for the 1950-51 session was presented at the annual general meeting of the Railway Students' Association, London School of Economics & Political Science, on May 30. The Committee recorded continued progress and expressed appreciation of the close personal interest which Mr. John Elliot, President of the Society, and Chairman of the Railway Executive, had taken in the activities of the Association throughout the session. The membership at the close of the financial year was 831, an increase of 55 over the previous year. The Swindon branch, membership of which totals 68, continued to function successfully. Details also were given of the ordinary meetings, visits and social activities, and of the Nottingham Convention and annual dinner which took place during the session.

Closing of Felixstowe Pier Station.—British Railways announce that as from July 2 they are closing Felixstowe Pier Station in the Eastern Region. Facilities for passengers and parcels are available at Felixstowe Beach and Felixstowe Town Stations and there is a frequent bus service in operation between the pier and dock and the town centre.

The "Closed Shop": Engineers' Guild Representations.—In response to a notification by the Edmonton Borough Council that a condition of employment in engineering and other appointments under the council is membership of a union affiliated or approved by the T.U.C., the Engineers' Guild Limited has represented to the council its view "that to require, as a condition of employment, that professional engineers be members of a trade union or any other organisation, apart from such as are recognised as conferring an appropriate professional qualification, constitutes an unwarrantable interference with professional and personal freedom, and is contrary to the interests both of the engineering profession and of the public which it serves." The Guild adds that any attempt

to impose such a condition on the engineering profession will be resisted, and asks for an assurance that professional engineers be exempt from the conditions of appointment imposed by the council.

Polish Railway Electrification.—The Katowice-Czestochowa-Warsaw and the Katowice - Wajcherowo - Pruszcz (near Gdansk) lines will be electrified under the Polish six-year economic plan.

Diesel-Hydraulic Industrial Locomotives for Brazil. — At the present time Maschinenfabrik Esslingen, A.G., is building a number of 200-b.h.p. diesel-hydraulic locomotives for industrial service in Brazil.

Collision in Algeria.—Ten persons were killed when an Oran-Algiers express came into collision with a horse-drawn mail van at a level crossing near Les Attafs in Algeria on June 13. The persons killed were all passengers in the van.

Welded Construction and Notch Bar Testing.—A joint committee on Materials and their Testing announces in association with the Institute of Welding a symposium on recent developments in notch bar testing of materials and their relation to welded construction. This will be presented in London on December 5 next. Papers are being invited from a number of British and foreign experts. These will be pre-printed and will be introduced by a reporter with a view to discussion.

Royal Highland Show at Aberdeen: Excursions.—Thirty long-distance excursion trains are taking visitors to Aberdeen this week in connection with the Royal Highland Show. Thursday was the peak day for excursions, and specials from Berwick, Kelso, Inverness, Hawick, Glasgow, Edinburgh, Dundee, and other towns were handled at Aberdeen Station on that day. Among the special freight trains with exhibits arriving for the Show were two from Dorchester and a special train load of tractors came from London. Specials conveying animals were run from different parts of the country.

International Trade Club at the South Bank Exhibition. — The International Trade Club established in connection with the South Bank Exhibition of the Festival of Britain now offers a further facility to British industry. Requests from business firms and trade organisations have resulted in a room in the club being set aside for booking in advance for periods of one day or more. This will enable firms to offer the hospitality of a club to business associates from home or overseas. All inquiries should be made to the Secretary, International Trade Club, Westminster Bridge Road, London, S.E.1; telephone, Waterloo 3671: ext. 11.

Forthcoming Meetings

June 22 (*Fri.*).—British Standards Institution, Golden Jubilee, Conversazione at the Natural History Museum, South Kensington, London. Reception at 7.30 p.m.

June 23 (*Sat.*).—Irish Railway Record Society, visit to Drogheda-Oldcastle branch, G.N.R.(I.)

June 30 (*Sat.*) & July 1 (*Sun.*).—Permanent Way Institution, London Section, visit to York.

June 30 (*Sat.*).—Irish Railway Record Society, visit to Inchicore Works, Coras Iompair Eireann.

Railway Stock Market

Stock markets reflected caution, and profit taking resulted in a setback in industrial shares, although the reaction has been small in relation to the substantial gains recorded since the Budget. Sentiment appears to have been affected mainly by a further setback in British Funds which carried 3½ per cent. War Loan down to 87¼. This has been due to talk that the trend to higher money rates is likely to be accentuated. With some long-dated stocks now down to a 4 per cent. yield basis it is argued that leading industrial shares which in some instances yield little more than 4 per cent., are probably overvalued unless there is the prospect of further dividend increases next year. Moreover, scarcity of materials, with rising costs, means that most companies will have difficulty in keeping profits at the same level unless they are able to expand turnover and there seems little prospect of achieving the latter apart from concerns playing a leading part either in rearmament or export trade. In addition there has been a general tendency to await the next moves in the Persian oil dispute. The further £20,000,000 of Treasury 3½ per cent. (Coal stock), issued over the week-end at 94, eased to ¼ below the issue price at one time, owing to selling, and this affected other nationalisation stocks including 3 per cent. Transport (1978-88) which at 83¼ now yields nearly 3⅝ per cent.

Foreign Rails have had a firmer appearance although there were few individual features. Canadian Pacifics at 54½ remained under the influence of the higher interim dividend, while the 4 per cent. preference stock strengthened to 73, and the 4 per cent. debentures to 93. There was buying of Leopoldina debentures in the hope that the payout may be effected during the next few months. The 4 per cent. debentures firmed up to 95, and the 6½ per cent. debentures were 140½, while Leopoldina ordinary and preference have been 10½ and 26½. Antofagasta ordinary eased to 9⅞, and the 5 per cent. preference at 63½ was less active now that the financial results and the further preference payment have been announced. On the other hand Nitrate Rails shares moved up to 23s. 6d. and Taltal were also better at 18s. 1½d. United of Havana stocks have been easier again in the absence of fresh news regarding the intentions of the Cuban Government; the 1906 debentures were down to 17. Anglo-Argentine Tram stocks remained fairly active, but were little changed in price, with the first debenture at around 29 since publication of the annual report. The latter emphasises that there has so far been no change in the position, but expresses the hope that the Argentine Government will recognise the company's reasonable claims. In other directions White Pass Yukon 6 per cent. debentures remained active around 88. International Railways of Central America common stock marked $14½. French election results helped to keep French railway sterling bonds steady with Midi and Orleans at 91½. Bolivar "C" debentures were 58 and La Guaira ordinary 85. Brazil Rail bonds were 90s. and San Paulo units 14s. 9d.

Road transport shares have been quite well maintained with Southdown at 102s. 6d., West Riding 52s., and Lancashire Transport 60s. 3d. B.E.T. deferred stock was active on hopes of an increase in the forthcoming dividend, and, although best levels were not held, recorded a good rise on balance at £565.

As was to be expected engineering and kindred shares reflected the moderate reaction in stock markets. Guest Keen eased to 61s. 9d., Vickers to 53s. 9d., and B.S.A. to 44s. 9d., while T. W. Ward came back to 76s. after their recent strong advance. Thornycroft at £6⅛ held part of the rise which followed news of the proposed 100 per cent. share bonus. Owing to the ploughing back of profits into reserves over a long period, resources employed in the business are much in excess of the issued capital. The bonus will bring the capital more into line with the true position.

Shares of locomotive building and kindred companies have been generally steady. A feature was a sharp rise in Charles Roberts to 111s. 3d. in anticipation of the pending results and hopes that there has been a settlement of the tax problem which arose following the transfer of wagons to British Transport. Vulcan Foundry were 31s. 7½d., North British Locomotive 19s. 10½d., Gloucester Wagon 17s. 3d., and Beyer Peacock 34s. 9d. Wagon Repairs 5s. shares were 15s. 10½d. and Birmingham Wagon eased to 39s. 6d.

Traffic Table of Overseas and Foreign Railways

	Railway	Miles open	Week ended	Traffics for week: Total this year	Traffics for week: Inc. or dec. compared with 1949/50	No. of week	Aggregate traffics to date: Total 1950/51	Aggregate traffics to date: Increase or decrease
				£	£		£	£
South & Cen. America	Antofagasta ...	811	8.6.51	144,120	+ 85,730	23	2,554,660	+ 1,135,780
	Costa Rica ...	281	Apr., 1951	c773,399	– c79,560	43	c9,611,880	+ c1,162,459
	Dorada	70	Apr., 1951	33,926	– 5,369	17	142,034	– 23,732
	Inter. Ctl. Amer....	794	Apr., 1951	$871,081	– $181,452	17	$4,624,190	– $206,998
	Paraguay Cent. ...	274	8.6.51	₤244,795	+ ₤41,457	49	₤10,277,094	+ ₤2,783,443
	Peru Corp. ...	1,050	May, 1951	$7,824,000	+ $1,150,000	48	$84,221,000	+ $19,886,942
	,, (Bolivian Section)	66	May, 1951	Bs. 17,879,000	+ Bs.8,708,000	48	Bs. 144,382,000	+ Bs. 37,699,336
	Salvador	100	Apr., 1951	c166,000	+ c18,000	43	c1,729,000	+ c105,000
	Taltal	154	May, 1951	$2,256,051	+ $685,126	48	$18,869,332	+ $3,218,865
Canada	Canadian National†	23,473	Apr., 1951	16,818,000	+ 2,159,000	17	64,458,000	+ 10,909,000
	Canadian Pacific† ...	17,037	Apr., 1951	11,648,000	+ 1,721,000	17	44,384,000	+ 6,731,000
Various	Barsi Light* ...	167	Apr., 1951	50,227	+ 16,440	4	50,227	+ 16,440
	Egyptian Delta ...	607	10.4.51	17,513	– 267	4	17,513	– 267
	Gold Coast ...	536	Mar., 1951	288,386	+ 29,182	52	3,141,271	+ 333,187
	Mid. of W. Australia	277	Mar., 1951	41,113	+ 7,335	39	357,497	+ 81,623
	South Africa ...	13,347	19.5.51	1,875,384	+ 414,731	7	13,234,293	+ 2,455,226
	Victoria	4,744	Feb., 1951	1,739,845	– 87,111	35	—	—

* Receipts are calculated at 1s. 6d. to the rupee

† Calculated at $3 to £1